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Jodie Copley

The University of Queensland

Merrill Turpin

The University of Queensland

Emma Justins

Mater Hospital Brisbane

Sarah Colclough

The University of Queensland

Jessica Hill

The University of Queensland

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Building Expertise in the Workplace: Occupational Therapists Learning Upper Limb Hypertonicity Practice

Jodie Copley*, Merrill Turpin*, Emma Justins+, Sarah Colclough*, and Jessica Hill*

* School of Health and Rehabilitation Sciences, The University of Queensland
+ Mater Hospital Brisbane, Mater Health, Raymond Street, South Brisbane

Abstract

Introduction: Increasingly, novice occupational therapists are working in private practice. It is important to understand how to build clinical experience in complex practice areas. Upper limb hypertonicity management is a complex practice area requiring advanced workplace training. This study aimed to identify the teaching and learning processes that assist occupational therapists to acquire this expertise.

Methods: Five hospital occupational therapists received 1.5-3 years of apprentice-style training in a specialist hypertonicity clinic. In-depth semi-structured interviews explored their experience. Qualitative Description was used to analyse the data.

Results: Participants found that knowledge needed to be applied to practice and then revisited in a cyclical way to deepen their understanding and build their clinical skills. They benefited from having responsibilities graded and repeated opportunities for hands-on learning of embodied knowledge. Producing comprehensive progress notes and teaching colleagues and students were useful learning tools. Learning with a group of colleagues involved observation of the expert, intensive correction and guidance, and group discussion, reflection and questioning to build expertise.

Conclusion: Workplaces need to intentionally support novice clinicians to gain expertise in complex practice areas using pedagogically sound training techniques. Continuous workplace training is needed to promote expertise in the face of changing healthcare funding policies.

I INTRODUCTION

Upper limb hypertonicity management is an example of a complex area of clinical practice in which occupational therapists regularly work. Hypertonicity is commonly experienced by people with neurological conditions (BurrIDGE et al., 2009; Marciniak, 2011) and is defined as an increased resistance to passive movement (Katz & Rymer, 1989), due to both spasticity and soft tissue stiffness (Sheen & McGuire, 2001). The main therapy aims when addressing hypertonicity are to decrease resistance to movement, increase passive and active range, and, where possible, retrain movement patterns including reaching for, holding, and manipulating items (Copley & Kuipers, 2014) to facilitate participation in daily activities.

Upper limb rehabilitation in the presence of hypertonicity is recognised as complex and challenging (Colclough et al., 2015; Turner et al., 2018). The diversity of the client group contributes to this complexity, in terms of both upper limb (Sheen & McGuire, 2001) and personal characteristics and experiences (Copley et al., 2008; Kuipers et al., 2006). Whilst there is a variety of upper limb intervention techniques now available to therapists, lack of detail regarding their individualised application has resulted in a need for more guidance in intervention decision-making and application (Hayward et al., 2020 Tan, Copley & Fleming, 2021).

Within Australia, the introduction of the National Disability Insurance Scheme has resulted in a movement away from government funded specialist disability services where novice therapists were able to work directly under the supervision of more experienced clinicians (Hazelwood et al., 2018; Moir et al., 2021). Instead, therapists are frequently finding themselves practising as the sole occupational therapist within a more generalised, interdisciplinary private practice setting (Hazelwood et al., 2018 & Moir et al., 2021). Therefore, developing an understanding of how to build therapist clinical expertise in complex clinical areas is important to improve practice competence and, therefore, service quality.

Previous research has investigated the development of expertise in hypertonicity practice (Burgess et al., 2008; Kuipers & Grice, 2009; Kuipers & McKenna, 2009; Rassafiani, 2009; Rassafiani et al., 2009). Previously, years of experience has commonly been used to identify clinical experts (Rassafiani, 2009). Within a 2009 study, Rassafiani utilised the Cochrane-Weiss-Shanteau (CWS) index to investigate the relationship between the length of general experience as an occupational therapist (OT) and the level of expertise in hypertonicity management, finding no association between the two. This suggests that other criteria, such as quality of performance, are more indicative of expertise (Rassafiani, 2009). Several studies have identified the clinical performance characteristics of experts in hypertonicity management (Burgess et al., 2008; Copley et al., 2008; Rassafiani et al., 2009). When expert therapists were compared with beginners, experts were found to prescribe more invasive interventions and were more discriminative and consistent with their intervention choices (Burgess et al., 2008; Rassafiani et al., 2009). Experts also demonstrate a holistic understanding of the client, engaging collaboratively to make decisions (Copley et al., 2008).

Few studies have investigated factors that help develop expertise in hypertonicity management. Using case vignettes, Burgess et al. (2008) applied the CWS index to identify the level of expertise in therapists with varying characteristics, including years of experience, caseload mix, and clinical experience with and training in hypertonicity management. Completing hypertonicity-specific training was the only factor significantly associated with increased expertise. However, the nature and content of this training was not identified (Burgess et al., 2008). Kuipers and Grice (2009) trained OTs in the use of a system aid to guide their intervention decisions for people with upper limb hypertonicity. Thirteen 'novice' therapists (with four or less years of experience) and eight 'expert' therapists (holding senior positions in brain injury rehabilitation, or recognised by peers) participated in the study. Following exposure to the aid, novices' clinical decisions changed to align more closely with expert reasoning when describing their decision-making for fictitious cases (Kuipers & Grice, 2009). Both these studies suggest that additional, targeted training was needed to foster expertise, rather than years of clinical experience alone (Burgess et al., 2008; Kuipers & Grice, 2009).

In the broader context of allied health practice-based learning literature, several authors have proposed the processes by which we learn practice (Delany & Golding, 2014; Lloyd et al., 2014). Delany and Golding (2014) used action research discussions with experienced allied health educators to investigate how to make the thinking of experts more obvious to novices. The findings inspired the 'make thinking visible' approach, which involved experts using structured reflection of their own practice to advance novices' reasoning (Delany & Golding, 2014). Lloyd and colleagues (2014) interviewed allied health professionals regarding their experiences of workplace learning. Participants perceived that protected learning time, supportive management, and having access to peers, expertise, and 'learning networks' lead to improved learning and clinical abilities (Lloyd et al., 2014). They also highlighted the importance of seeking out learning experiences within the workplace environment rather than relying on external professional development opportunities (Lloyd et al., 2014).

Goodyear and Markauskaite (2012) reviewed the development of a professional learning system (based on Lave and Wenger's (1991) work on learning in a community of practice) which linked individual therapists in different geographical locations to allow shared learning opportunities. The authors developed a five phase 'community learning cycle' of represent – share – debate – refine – re-embed, aimed to improve clinical performance (Goodyear & Markauskaite, 2012). In particular, the final phase of 're-embed' – which involves the creation of new tools and job-aids and the incorporation of the new knowledge into everyday work – was seen as crucial to ongoing improvement in clinical abilities (Goodyear & Markauskaite, 2012).

Rassafiani (2009) suggests that professional learning methods relevant to hypertonicity practice include critiquing the clinician's practice and providing feedback, encouraging reflection, and observing expert clinicians and contrasting their practice with one's own. However, research to date has not identified which processes clinicians find beneficial in developing expertise in upper limb hypertonicity practice in authentic clinical settings. To address this gap, this study aimed to describe the experiences of OTs undergoing specialised professional training in an upper limb hypertonicity clinic.

II METHODS

Qualitative Description (QD) provided the methodological framework for this research (Sandelowski, 2000). QD was considered appropriate to achieve the aim of capturing therapists' perceptions and experiences in an authentic practice setting as it allows a low-inference representation of the data. In being less interpretive than other forms of qualitative analysis, QD increases the likelihood that the data gained will provide a summary of everyday events that the people involved (in this case, the therapists receiving training in the clinic) would agree is accurate and represents the meaning they attribute to their experience of the event (Sandelowski, 2000).

A Study Setting

The study was conducted in a metropolitan university clinic (the clinic) specialising in upper limb hypertonicity services for children and adults with cerebral palsy, acquired brain injury and stroke. Services included: assessment; interventions including splinting, casting, and movement training; and referral to, and follow up from, surgery and Botulinum toxin-A injection. The clinic operated one day per week and was managed by an OT considered an expert due to 25 years' experience in the field and long-term involvement in research and continuing professional development (CPD). The training program described was developed in conjunction with a major metropolitan hospital to build the hospital OTs' expertise in hypertonicity management. Participants worked at the weekly clinic and continued their roles in the hospital for the remainder of the week. Training occurred through an apprenticeship model, over a one-to-three-year period. Each OT began training in the role of assistant and increasingly assumed responsibilities for service provision. At any one time, services were provided by the expert OT and two hospital OTs completing the training, one with more experience and one with less experience. In addition, pairs

of undergraduate OT students regularly completed a 7- or 10-week practice education placement in the clinic.

B Participants

Six OTs completed the training over a four-year period. As this training was a pilot program, purposeful sampling was used (Palinkas et al., 2016). All OTs involved in the training were invited to participate in the study, with five consenting and one declining, citing a lack of time. Participants were female (reflecting the female dominant profile of the OT profession) aged 27-43 years (mean age 33.8 years; SD 5.93). Participants' experience in hypertonicity practice prior to the training ranged from zero to seven years (mean 1.4 years; SD 1.64) and their general OT experience ranged from 2 to 13 years (mean 6.6 years; SD 4.17). Three of the five participants had attended hypertonicity workshops in the past, and one had attended a Botulinum toxin-A workshop. Participants worked in a range of clinical caseloads at the partner hospital, including upper limb therapy, acute neurology, general medicine, and child development.

C Data Collection

Approval was granted by the ethics committees at both the hospital and university (2012001416). Data were collected using a demographic form and semi-structured interviews, as they allow exploration of the participants' perspectives (Sandelowski, 2000). Interviews were completed after each participant had undergone a minimum of one year of training, with each therapist participating in one face-to-face interview. All interviews were conducted by a research student who was not involved in the clinic or the training. Questions focused on participants' experiences of the specialised training and each interview lasted 60-90 minutes. Interviews were transcribed verbatim, and pseudonyms assigned.

D Data Analysis

As appropriate to QD, data were coded using inductively generated coding categories (Sandelowski, 2000). One member of the research team read the interview transcripts and generated initial codes. Three authors (SC, JC, MT) then reviewed 45% of the data, comprising a sample from all interviews, to test the initial coding system and refine it. Codes were modified by consensus and a revised coding strategy was developed. A process of peer checking was then conducted, whereby two members of the research team each coded a sample of the data independently according to the revised coding strategy and compared coding. Discrepancies were discussed and adjustments made. One researcher then coded the entire data set using the final coding strategy.

III FINDINGS

Six codes emerged from the data: (1) practical learning: a cyclical process; (2) practical learning occurred in a sequence; (3) learning hands-on; (4) learning through documentation; (5) learning together; and (6) learning with the expert. Each code is described, with illustrative quotes.

A Practical Learning: A Cyclical Process

While participants identified possessing theoretical knowledge was an essential starting point for practice, they emphasised that timely discussion and reflection with peers during client service provision was critical for retaining knowledge and making it meaningful.

Participants perceived essential knowledge for practice in this area to include: an understanding of anatomical, neurological, and biomechanical concepts; aims of interventions; and potential effect of interventions on hypertonicity, contracture, and movement control. Gaining knowledge through prior CPD experiences had allowed concentrated learning in a safe environment without their learning impacting on client service provision.

Through [the hypertonicity workshop] you could do a lot of discussion and questions, where no question is the wrong question. Whereas, when you are with a client you need to be more aware of making sure you make it a good experience for them and it's not an obvious learning experience for you. (Evelyn)

After acquiring this base knowledge, practical learning was required to apply the knowledge during clinical practice whilst 'experiencing' learning of skills such as interview, assessment, and treatment methods. Therapists viewed the "reflection process" (Jill) on these experiences as important in consolidating their knowledge and skills.

The participants explained it was useful if these practical experiences were followed up, in a cyclical manner, with *further* review of theory through workshop notes, textbooks, and journal articles. This allowed refinement of theoretical knowledge, practical knowledge regarding upper limb assessment and treatment, and understanding of the dynamics of client-therapist interaction.

B Practical Learning Occurred in a Sequence

Participants reported that mastery of practical skills was promoted through scaffolding of their responsibilities in a defined sequence. For example, they perceived it as advantageous to observe "one or two good sessions" (Jill) prior to hands-on involvement, for client interview and upper limb assessment and treatment methods.

After observation, some noted the usefulness of practising techniques such as splinting and casting on people without brain injury (e.g., each other) before using these techniques with clients. Mastering the application of the techniques with clients was also described as occurring in a sequence.

Usually, you would learn to measure [range of motion] before you learn to range the joint. And the same with the techniques of the splint or cast: initially learning to do the splint design, and then do the application of the splint while someone else holds and then learning how to hold [the position] while someone else splints, so that's another step. (Evelyn)

Participants valued graded responsibility in the clinic, particularly as clients presented with a range of complexity in upper limb presentation. As the training therapists gained skill, they progressed from being responsible for clients with less complex to those with more complex presentations. Although they were always involved with complex clients, their responsibilities were graded from leading fewer, simpler components of the session (e.g., asking questions about home supports) to all components of the session (interview, upper limb assessment, making intervention decisions, implementing interventions).

C Learning "Hands-on"

All participants reported that repeated "hands-on" learning with real clients in the clinical setting was an essential component of gaining expertise. An important aspect of hands-on learning was being able to feel muscular resistance and contracture.

[The clinic] is that clinical environment, it's not a classroom, it's not a workshop, it is real life, real clients. Because you can't mimic someone with increased tone or contractures, you can't understand that until you've seen a client with it. You can't feel what contracture versus tone is like until you have actually put your hands on a client. (Ally)

This was particularly important to allow therapists to learn how to move, position, and stabilise the client's arm and hand to assess the limb, analyse movement patterns, decide how to address movement retraining, fabricate splints, and apply casts.

The hands-on aspect ... how to take range of motion measures, how to take a splint pattern on a hand which doesn't have the normal anatomical presentation... Being able to hold a [hypertonic] hand in the position for prolonged periods of time for splinting and casting are different than when you practice on someone that has a perfectly normal arm that is not affected by high amounts of tone, so until you actually get your hands on somebody that has hypertonicity, it's really difficult to develop the skills because you don't know what it feels like ... [and] how hard it is going to be to do these things with these kinds of arms. (Ally)

Another skill that participants believed they needed to learn by doing was the interview process. Participants described that a large amount of information was gathered during assessment to capture a comprehensive picture of the client to inform treatment planning. Interviewing was seen as highly skilled as it required “to-ing and fro-ing” (Evelyn) between gathering client information and providing individualised client education to ensure client-centeredness and informed decision making. To master this skilful interaction, participation in the interview process increased over time in a graded manner.

The other thing that I think needs hands-on [experience] is with each interview. That is something that I didn't know much about when I first started, but I've learnt a lot of skills in that interviewing process and engaging the client in the interview process. That needed to be experiential learning. I couldn't just read it. (Evelyn)

The opportunity to work with a range of client presentations was identified as an aspect of hands-on experience that optimised learning. While seeing clients with different upper limb characteristics and life situations, then seeing the results of intervention, the training therapists were able to refine their practice. Participants noted increased knowledge regarding which intervention options were most likely to benefit each client.

[I had] the opportunity to see lots of different clients and lots of client groups, lots of presentations, so I've got a fairly good knowledge bank of what you can do in different situations with different people. (Evelyn)

D Learning Through Documentation

Therapists found that completing documentation such as progress notes, which were reviewed by the expert or fellow trainees, helped consolidate learning. The documentation procedures in the clinic required progress notes to be highly descriptive, including detail about the client's history, context and priorities, their upper limb status, and the therapist's reasoning regarding how the proposed upper limb intervention would address the client's daily life goals. Participants reported that the documentation process helped prioritise information from assessment and helped gain clarity on how the intervention needed to be implemented.

You have to write down completely thorough, completely detailed to the 'nth' degree, [information] about joint position and the way in which the hand, finger joint was moving or positioned, because these patients might not come back for two or three years and you need to be able to monitor their change. I found the arduous task of writing the notes quite good...quite an effective tool for clinical reasoning because you have to think about well, why did you do that, why did you do that? Because you have to articulate that in the notes. (Beth)

E Learning Together

Participants noted the benefits of working in a team of therapists with different levels of knowledge, skill, and experience. Therapists found that working with varying levels of expertise enhanced their learning. Learning took place through processes of group discussion, reflection, and opportunities to teach and share knowledge with each other. Being required to describe clinical processes and techniques to therapists and students of different levels of experience, and listening to the expert do this, built a repertoire of language about hypertonicity, and refined their skills in explaining complex concepts in a clear way, further consolidating the training therapists' own knowledge.

[Students] provide a lot of opportunity for teaching and having to share your knowledge and describe things. ... With [the expert] being the main supervisor and having such a broad experience of supervising students, you learn a lot of information and ways of explaining things and ways of thinking about things or how to interact with a client during a session by listening to the encouragement and instruction that she gives to the students... Taking the opportunity to learn while they are learning. (Evelyn)

Learning together also provided the opportunity for giving positive and constructive feedback to one another, further targeting learning needs.

There were lots of opportunities, if you had more ideas, to run them by each other and reflect that way: 'I was thinking this, you were thinking that, would this have worked?' (Evelyn)

F Learning with the Expert

Learning with the expert was seen as invaluable. In the beginning stages of learning, training therapists could observe the expert with clients to learn processes and techniques, and then discuss and reflect with the expert following the session, comparing their observations about the client's presentation.

Getting that discussion [with the expert] and the process of what you've seen and why it happened that way and how you'd interpret it compared to [how] someone else might interpret it... it was a great way for me to learn. (Jill)

Receiving feedback from the expert was also beneficial once the training therapists had progressed to hands-on involvement in the client sessions. It was expected that the training therapist would proactively respond to feedback in upcoming client sessions and take initiative to request specific learning opportunities within the session.

[I] would get written feedback from the [expert] so that I could keep a written list of all the things I was to work on. It was specific feedback like needing to clarify more or reflect more or give more pauses between what I was asking [clients], to give [the client] more time to make decisions. (Evelyn)

Participants highlighted that, as they took on more responsibility, working alongside the expert involved constant listening, observation, hands-on instruction, correction, and guidance. By observing the expert's non-verbal body language, patient handling skills, assessment and treatment techniques, the training therapists could identify what to trial in their own client interactions. To help refine their skills, the expert first demonstrated and then used hand-over-hand or verbal and non-verbal prompting when the training therapist took over.

Working with the [expert] definitely has been the best way for me. So having somebody teach you practice instead of just learning *about* something... having the [expert] there to help you learn *how* to do it...that's been really useful. (Evelyn)

IV DISCUSSION

With Australian occupational therapists seeing a growth in private practice, where therapists are often practising isolated from their peers (Moir et al., 2021), it is important to understand how to build therapist skills in complex areas of practice to ensure the quality and safety of service delivery. The aim of this study was to describe the experiences of OTs completing specialised training in an upper limb hypertonicity clinic. The findings illustrate four main components of continuing professional learning that were important for development of expertise. First was the mutual influence of knowledge and practical learning. Second was the need to grade exposure and responsibility in the clinical context, with some skills being learnt in a defined sequence. Third, a rich picture of *how* the therapists learnt was described – through “hands-on” learning, reflecting on experiences, and documenting. Finally, the findings highlight the importance of *who* they learnt with – their peers, students, and the expert.

Evans and Guile (2012) argued that theoretical knowledge as it is understood in the university context cannot simply be 'joined together' with practice. Rather, knowledge is adapted and “re-contextualised” (p. 117) through a social process for students to use it to guide their practice in the placement context (Evans & Guile, 2012). In our study, although therapists required base knowledge gained from prior reading and CPD, for this knowledge to be meaningfully integrated into practice they needed to revisit it after practical experiences and discussion with others. Linking theory and practice in this cyclical manner precipitated a deepening of their theoretical knowledge, leading them to re-interpret its application. This cycle is reminiscent of Goodyear and Markauskite's (2012) 're-embed' phase of clinical learning and suggests that therapists may benefit from explicitly applying information gained from CPD and then taking time to return to this information and create tools that ensure its incorporation into their daily work.

In this study, therapists appreciated scaffolding their clinical responsibilities whilst learning, gradually assuming a lead role with more complex clients and more challenging interventions. It was also apparent that learning the technical skills for hypertonicity practice needed to occur in a defined sequence. Eraut (2010) asserts that the allocation and structuring of work is central to progress, because it allows tailored support to enable mastery. Similarly, Billett (2002) suggests that learning is facilitated when senior colleagues manage the pace and sequencing of tasks for learners, as occurred in this study. The finding that even the experienced group of training therapists in this study benefited from graded responsibility in this complex area of practice supports the notion that “*fine tuning* an intervention to the needs of individual clients can be much more complicated than basic care” (Eraut, 2010 p. 40). Our participants’ emphasis on the importance of skilled client-centered interviewing indicates the need for a high level of individualisation within hypertonicity practice. In today’s funding climate, grading practice in these ways for recent graduates, let alone experienced practitioners learning a new specialty area, is an increasing challenge.

When considering *how* therapists in this study learnt, hands-on experience was considered vital. The participants conceptualised “hands-on” as not only handling the clients’ limbs and “feeling” their tone, but also attempting the dynamic interaction required to both gather and provide information during the interview process. This experiential learning equates with Higgs et al.’s (2001) professional craft knowledge, providing opportunities for learning of embodied knowledge that is not easily represented in formal learning situations. The physical nature of learning embodied knowledge is appreciated in both Billett’s (2016) assertion that haptic engagement, or feeling and tactile competence, is essential to some health care treatments, and Schell’s (2018) discussion of therapists using “body-based knowledge” (p.386) derived from their senses. Observing and modelling from the expert assisted learning of this tacit knowledge through a range of cues (e.g., non-verbal’s, tone of voice) (Billett, 2016).

The use of reflection was highlighted by therapists in this study as a strategy for furthering their learning and competence. This is unsurprising, given that reflective practice is considered an essential skill for professional competence (Manne et al., 2009). However, Manne et al.’s (2009) systematic review of reflective practice in health professions education found that reflection appears to decrease in more experienced practitioners and with the time demands of busy clinical environments. Conversely, appropriate supervision, challenging activities (Manne et al., 2009), and practitioners being asked to represent their actions in a formal way have been found to stimulate reflection (Roth, 2010). In our study, training therapists were encouraged to regularly present their knowledge, actions, and ideas to colleagues (echoing Delany and Golding’s (2014) ‘make thinking visible’ approach), discussing and comparing their thinking and understanding.

Learning through documentation of progress notes after client encounters also offered the therapists a means of extending their reflection on practice. The need for trainees to convey the logic of their thinking in a detailed, descriptive manner that others could understand helped consolidate their reasoning and guide their future practice (Turpin & Hanson, 2018). Used in this way, clinical documentation can be seen as a “mediating artefact” (p.48) in the work environment that serves to capture high-level professional knowledge (Eraut, 2010). The common practice of producing quick, concise progress notes in a business model, private practice setting with key performance indicator (KPI) requirements may not allow this opportunity.

Learning in a community of practice (CoP), including their peers, the expert, and the students, was perceived as key to their development of expertise (Lave & Wenger, 1991). Routine practices included: listening to and observing each other’s and the expert’s work; discussing and questioning decisions and actions; and receiving intensive correction and guidance in the moment. These practices mirror the professional learning methods suggested by Rassafiani (2009) as particularly useful for gaining expertise in hypertonicity management. They also reflect the intentional workplace learning strategies described by Billett (2002) which make concepts and procedures accessible “through direct interaction and shared engagement between more and less experienced co-workers” (p.33).

Amin and Roberts (2008) proposed a typology of CoPs, which suggests that in our study, the CoP formed may have been a combination of a professional CoP and a craft/task-based CoP, the latter characterised by learning of embodied knowledge through long-term, apprenticeship-style engagement (Amin & Roberts, 2008). Where the work is complex, the design of a CoP needs to match the complexity of the task, and it may be useful for teams to be small, to have a mix of abilities, and for senior staff to be close at hand, as occurred in this study (Eraut, 2010). Additionally, in this CoP, the training therapists' involvement in teaching each other and the students provided further opportunities to consolidate their own learning. This finding supports the notion that the act of teaching others deepens one's own understanding (Fiorella & Mayer, 2013). Billett (2002) discusses the importance of workplace affordances and tailoring a "workplace learning curriculum" (p.33) to hone and extend workers' knowledge and skills in ways they could not achieve through everyday workplace experiences. This pedagogical approach to workplace learning is important for development of expertise in complex areas of practice, as well as for lifelong learning throughout one's career.

A Implications for Occupational Therapy Practice

For novice therapists wanting to expand their clinical expertise into complex practice areas such as upper limb hypertonicity practice, four methods of supporting learning were highlighted. These included, 1) the provision of time to consolidate CPD learning involving opportunities to practice, discuss and reflect under the guidance of an experienced clinician, 2) a structured process of scaffolding of responsibilities in which the novice therapist is provided with the opportunity to observe and model an experienced therapist, gaining supervised hands on experience, 3) being encouraged to reflect on their practice and communicate this knowledge to their colleagues, and 4) working within a CoP in which novice therapists were able to discuss and learn from their colleagues with differing levels of experience. These findings echoed previous literature emphasising the importance of novice therapists having access to occupational therapist peers to support the development of confidence and competence in complex areas of practice.

Since the introduction of the NDIS there has been significant variation in the level of support and resources available to novice therapists (Moir et al., 2021). Many therapists are now required to work in private practice settings, frequently off-site, and as the sole occupational therapist, limiting access to these necessary supports (Moir et al., 2021). Further, all four of the learning practice described above require time outside of what would be considered billable hours. Within the business model in which private practices typically run, therapists are rarely afforded time within their workday to expand and consolidate their learning (Hazelwood et al., 2018). However, it is clear from the findings of this study that, for novice therapists to work in complex clinical areas such as upper limb hypertonicity practice safely and effectively, it is vital that workplaces prioritise and make affordances for appropriate learning experiences with experienced occupational therapist colleagues.

B Limitations of the Study and Future Research Directions

This study provided insights into methods of training to support novice therapists within complex areas of practice such as hypertonicity, however limitations remained. As this was a pilot training program, only five participants were included, and findings should be interpreted with this in mind. Further, data was collected using a single interview with participants and captures only their perceptions of what helped them learn. It is also acknowledged that all participants were employed by the same hospital, and had varied caseload experience at the commencement of their training in the clinic. In relation to data analysis, while strategies such as peer checking and constant comparison were used to support trustworthiness and credibility of interpretations made, the researchers' experiences and perspectives may have influenced analysis to some extent.

Future research could deepen understanding of teaching and learning processes used to acquire expertise by using observations and longer-term engagement with participants.

Additionally, further research could explore the impact of training programs such as the one described in this study on overall quality of care provided to the client. Finally, with the continued changes to the funding models in which occupational therapists are required to work within, an important future research focus is the development and maintenance of expertise in complex practice areas that align with the budgetary requirements of the different national healthcare funding schemes.

V CONCLUSION

With the growing expectations of novice occupational therapists within Australia, workplaces need to intentionally support novice clinicians to gain expertise in complex practice areas using pedagogically sound training techniques. Continuous workplace training is needed to promote expertise in the face of changing healthcare funding policies, to ensure not only the safety of the client but the overall quality of care.

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