INTENSIVE APHASIA SPEECH-LANGUAGE THERAPY PROVISION DURING CLINICAL PLACEMENTS: CLIENTS' EXPERIENCES AND STUDENTS' COMPETENCY DEVELOPMENT.

A thesis

submitted in partial fulfilment

of the requirements for the Degree

of

Master of Science in Speech and Language Sciences

in

the University of Canterbury

by

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University of Canterbury

2021

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Acknowledgements

The author wishes to extend sincere gratitude to Gina Tillard, Dean Sutherland and Kate Cook for the opportunity to undertake this study and their support in the preparation of this manuscript. Thank you for your kindness and patience, and attention to detail particularly in regards to my love of long, long sentences and abhorrence of full stops. Thank you to the students and clients involved who made this study possible. Additionally, thank you to Daniel Gerhard for statistical consulting and to Eleanor Maxwell for completing the time-consuming task of verifying the interview transcripts.

Finally, a special heartfelt thanks to my late grandmother Phyllis Stewart for supporting me in this study. You were so excited to see me begin postgraduate research that you gifted me my inheritance early to fund it. I hope I have done you proud and that, wherever you may be, you are enjoying seeing me complete it.

Abstract

The aim of the current study was to investigate the development of speech-language therapy (SLT) students' clinical competency within clinical field placements involving the provision of intensive therapy, and to explore the experiences of clients who received intensive therapy delivered by students. Participants consisted of 2 groups: SLT students in the fourth year of the undergraduate Bachelor of Speech and Language Pathology programme (n=7) and clients (adults with communication impairments following stroke) who had received intensive treatment provided by students (n=10). A pre-test post-test design was utilized to evaluate the development of students' clinical competency, confidence and anxiety. Student participants took part in a pre- and post-placement questionnaire in which they self-rated their confidence and anxiety in clinical tasks. Student participants' clinical competency was assessed using the COMPASS® assessment tool. Client participants completed semi-structured interviews discussing their experiences and perceptions of intensive treatment and student involvement. Student participants' questionnaire responses and COMPASS® scores were analysed with descriptive statistics. Client participants' interviews were analysed through reflexive thematic analysis. Student participants made comparable change in competency ratings when compared with the class average, perceived reductions in self-ratings of anxiety and increases in self-ratings of clinical confidence. Client participants had positive perspectives of intensive therapy provided by SLT students. 6 themes were developed from the semi-structured interviews: the hard work is worth the effort, more treatment is better than less, there's a "right time" for intensive treatment, it didn't feel like they were students, we just got on so well, and they listened to what I wanted. The findings add to evidence that clients value access to intensive treatment and have positive experiences with SLT students and extends the evidence to suggest that student-implemented intensive therapy benefits both students and clients. Implications for clinical practice and future research directions are discussed.

1. Introduction

Practical experience through clinical education is an essential component to develop competent, work-ready allied health graduates. There is growing demand on speech-language therapy (SLT) services to provide adequate numbers of clinical field placements to meet the needs of students internationally and within New Zealand (NZ) (Royal College of Speech Language Therapists, 2021; Speech Pathology Australia, 2018; Westerveld & Garvis, 2014). Concurrently, despite it being widely understood that rehabilitation intervention post-stroke should be intensive, allied health services are struggling to provide the recommended levels of treatment described in research and Clinical Guidelines (Yeo et al. 2016). Practicing speech-language therapists are faced with two dilemmas; contributing to the growth of the profession by supporting students to develop their skills through access to clients, and supporting the progress of clients through access to appropriate treatment. It is therefore suggested that SLT student block field placements pose an opportunity to provide greater treatment intensity resulting in better service to clients while also developing the clinical competence and confidence of the students.

1.1 Block Field Placements in Allied Health Training

Clinical education is essential in Allied Health training programmes as a platform to ensure competence to practice (O'Brien et al., 2019). It provides opportunities for students to apply the theoretical knowledge gained through coursework into professional practice and for the development of clinical skills. Specific skills such as clinical reasoning, time management, adaptability, planning, and organization develop over the course of clinical education experiences under the guidance of a qualified Allied Health professional (Jones et al., 2015;

O'Brien et al., 2019; Rodger et al., 2008; Speech Pathology Australia, 2005). Allied Health students are required to demonstrate competency across such clinical and professional domains prior to successfully graduating and entering the profession.

1.1.1 Definition of "Entry-Level" Clinical Competency

Under NZ law, only a person who holds a current practicing certificate as a health practitioner can claim to be practicing in that profession (Health Practitioners Competence Assurance Act, 2003). Practicing certificates are granted by the national association or registration authority of each Allied Health discipline. Graduate speech-language therapists[1] who hold a Bachelor or Master's degree from a New Zealand Speech-Language Therapists' Association (NZSTA) accredited programme are eligible for membership in the NZSTA (NZSTA, 2018a). Programmes become accredited through evaluation against the standards described in the NZSTA Programme Accreditation Framework (PAF) (NZSTA, 2018a). Accreditation serves to protect the public, ensure the quality of graduates, outline the range and standard of practice expected of newly graduate speech-language therapists for employers, and inform SLT students of the standards and range of competencies to be achieved in order to be granted recognition as members of the profession (NZSTA, 2018b).

In line with the NZSTA PAF, a newly graduated speech-language therapist will be equipped with the skills to "analyse and generate solutions to unfamiliar and sometimes complex problems, be able to select, adapt, and apply a range of processes [relevant to speech-language therapy, and possess] advanced generic skills and specialist knowledge/skills in a

[1] Also called speech-language pathologists or speech and language therapists internationally

professional context" (New Zealand Qualifications Authority, 2003, p7). The requirements of the NZSTA PAF also necessitate SLT students receive clinical experience and academic instruction in communication and swallowing disorders across the lifespan, including those occurring in childhood developmental disorders and acquired diagnoses, such as cerebrovascular events (stroke).

It is desirable that SLT students also possess some amount of 'clinical self-efficacy' or confidence when entering the profession. In a broad sense, self-efficacy can be conceptualized not as the knowledge or skills possessed by an individual, but what they believe they can do with their knowledge and skill (Bandura, 1997). Clinical self-efficacy in speech-language therapists has been described as "an individuals' belief about [their] clinical capabilities" (Pasupathy & Bogschutz, 2013, p152). Clinical self-efficacy is thought to develop when reflective cognitive processes are applied to guide clinicians to reflect upon the successes and challenges they experience in clinical interactions as the complexity of the clinical tasks slowly increases (Bandura, 1997; Lee & Schmaman, 1987; Rudolf, Manning & Sewell, 1983). Clinical self-efficacy can therefore be viewed as an aspect of competence and an outcome of successful clinical education: the production of graduates with the knowledge, skills, and confidence necessary for practice.

1.1.2 Usual Practice for SLT Students in NZ

In both undergraduate and postgraduate clinical SLT programmes across NZ, Australia, the United Kingdom, Ireland, the United States of America and Canada, students develop professional competencies through a combination of on-site campus-based clinical experiences and external off-site clinical "field placement" experiences within real-life SLT

workplace (McAllister, 2005; NZSTA 2018b). Field placements are similar to work-integrated learning and internships described in other literature, such as in the fields of nursing and teacher training (Aprile & Knight, 2020; Fleming & Pretti, 2019). In some programmes, students also receive a combination of "weekly" (in which a student spends less than two full days a week) and "block" (in which a student spends more than two full days a week) placements, which may be conducted in the campus clinic or external "field" SLT service settings (Sheepway et al., 2014).

Campus-based clinical experiences are typically "weekly", provided alongside academic course work, and under the guidance of a university-employed clinical educator. Often campus-based clinical experiences also include peer-group learning with multiple students per clinical educator, and/or involvement in focus or reflective practice groups (NZSTA, 2018b; Tillard et al., 2018).

In contrast, clinical field placements are typically "blocks" within an external SLT service setting in which the student does not simultaneously complete academic coursework. The students are under the guidance of an SLT clinician who is often referred to as a "field supervisor", with access to support from a university-employed clinical educator (NZSTA, 2018b). Field supervisors, also referred to as field educators or practice educators in literature, typically volunteer to have students placed within their services. There is variability, often at the discretion or ability of the field supervisor, to whether block field placements have 1:1 student to supervisor ratio or if a group of students complete their block field placements simultaneously.

During campus or field based clinical placement, or weekly or block models of placement, SLT students complete formative assessment to monitor student learning and develop learning plans, and summative assessment to evaluate learning. In NZ and Australia, The Competency Assessment in Speech Pathology (COMPASS®) is used for both formative and summative assessment of competency (McAllister et al., 2006). This tool involves rating competency units using a visual analog scale. A placement on the visual analog scale is guided by behavioural descriptors and concepts of novice, intermediate and entry-level descriptors. "Novice" describes a level of competency in which the student would require a high amount of support to develop or access relevant knowledge base, skills or actions, while "Entry-Level" refers to independent use of knowledge, specific skills, and professional attributes that should be demonstrated prior to graduating (McAllister et al., 2011). The rating scales utilized in COMPASS® were generated from competency-based occupational standards developed nationally in Australia (Speech Pathology Australia, 2001) and include 7 major units of competency: assessment; analysis and interpretation; planning of speech pathology intervention; planning, maintaining and delivering speech pathology services; professional, group, and community education; and professional development. Following the completion of formative assessment using COMPASS® at the mid-way point of placement, the SLT student and their supervising speech-language therapist set learning goals and identify teaching strategies or learning opportunities required to develop competency further throughout the rest of the placement. For final year students in their final clinical placement, the aim is not only to progress in competency, but demonstrate 'Entry-Level" competence, where the student is deemed ready to enter the profession (NZSTA, 2018b; Speech Pathology Australia, 2001).

1.1.3 The Role of Block Field Placements in Competency Development

Direct clinical contact has historically been considered an integral component of competency acquisition, as reflected in historic Speech Pathology Australia (SPA) criteria to receive 300 hours of clinical experience during training (McAllister, 2005). For the SPA and NZSTA, this criterion has since been dismissed (SPA, 2005). This is a result of growing acceptance that competence is developed and demonstrated in a variety of ways (such though learning models including indirect clinical experience simulated learning opportunities, and case-based learning), and the acknowledgement that a "magic number" of clinical hours and experiences required to develop competence is not clear (McAllister, 2005).

Although the value of other learning models are beginning to be widely recognized, the perception that block field placements are preferable or more advantageous persists. Perhaps it is the "real-life" nature of block field placements that leads to perceptions about effectiveness. Authentic learning opportunities continue to be valued by students, who often describe feeling a greater sense of purpose when interacting with real patients in community settings compared to both simulated learning opportunities (Quail et al., 2016) and "real" campus-based clinics (Lincoln et al., 2004). Block field placements are still viewed as an essential part of clinical education in NZ, Australia, and other parts of the world, and engagement in field or campus-based clinical experiences make up 25-33% of the practical content of university programmes (Brown et al., 2011; McAllister & Nagarajan, 2015).

There is little empirical information about the relative effectiveness of block field placements, with literature characterized by descriptions of opinions and perceptions which may not be able to be generalized (Briffa & Porter, 2013; Sheepway et al., 2014; Sheepway et

al., 2011). A 2015 study showed that block field placement models were perceived to be the most effective type by nursing students but in reality were not as effective as other models in the development of student competency (Claeys et al., 2015). This result suggests that perceptions of placement effectiveness do not reliably correlate with actual development of student competency. Similar findings were identified in a comparison of three learning environments comprising a standardised patient, a virtual simulated patient, and face-to-face contact with a real patient in a community setting (Quail et al., 2016). SLT students made comparable changes in communication skill and confidence levels across all three conditions and described the simulated conditions to be more challenging but also perceived the simulated conditions to be inferior models. These studies demonstrate that placement effectiveness and students' perception of value are not always in agreement.

In addition to being viewed by students as more valuable, block field placements provide students with authentic opportunities to develop SLT competencies within real-life practice environments (Attrill et al., 2015; O'Brien et al., 2019; McAllister et al., 2011). It is within field placements that students develop a greater understanding of components of treatment which may not be acquired through direct teaching and lecture material (Attrill & Gunn, 2010). Additionally, block field placements may affect the development of indirect clinical skills such as time management, planning and organization. Students are expected to benefit from involvement in real-life clinical settings by learning about the reality of service provision in the context of high demand (Parker & Emanuel, 2001). A study by Lincoln et al. (2004) explored the indirect skills of students on placements in campus-based settings compared with those in field clinical settings to find that students in the field settings had improved self-ratings in time management abilities in addition to a greater sense of purpose compared to their campus-based peers. As the understanding of the advantages and

disadvantages of different learning models on competency development grows, block field placements continue to be valued by students due to the opportunity they provide to practice skills in authentic environments. The success of block field placements as a learning experience can be amplified through the adjustment of factors affecting the learning environment.

1.1.4 Factors Affecting Development of Competence

Many factors have been demonstrated to influence students' development of clinical competence within block field placements. For example, exposure to a volume and variety of clinical exercises (AlHaqwi & Taha, 2015; Rindflesh et al., 2013). However, research suggests that more important than the quantity of experiences a block field placement offers, is the quality of the learning environment that makes up the placement. A welcoming clinical environment has been shown to be an indicator of quality learning experiences (Rodger, et al., 2011). The relationship between student and supervisor has also been identified as a factor influencing the success of block field placement (Jesse, 2016; Kanno & Koeske, 2010; Lee, 2008; O'Brien, et al., 2019). The type and variety of clinical education strategies used can also have a significant effect on the learning environment provided in a block field placement. The theory of experiential learning described by Kolb (1984) is often used to conceptualize learning opportunities. In this theory, a learner cycles between concrete experience, reflective observation, abstract conceptualization and active experimentation (Kolb, 1984; Kolb & Kolb, 2009). Clinical education in general utilizes a variety of clinical education teaching strategies to support students to progress through the cycle.

Strategies such as the provision of effective feedback and peer learning are considered to enhance learning opportunities. Feedback provides students with information on their current practice and provides practical advice for improving their performance (Clynes & Rafferty, 2008). The SLT students surveyed by Quigly et al. (2020) identified that the provision of effective, student-centered feedback was one of the four features that had the most impact on students' experiences of block field placement. Graduated practice, guided practice, and the application of feedback are considered essential teaching strategies to develop clinical self-efficacy or confidence (Bandura, 1997; Rudolf et al., 1983; Lee & Schmaman, 1987). Peer learning is another strategy that field supervisors and clinical educators can use. Health science students have identified that having access to peer support while on block field placements can be valuable (O'Brien et al., 2019). Practice-based learning guidelines recently updated by the Royal College of Speech Language Therapists (RCSLT) acknowledge the benefits peer learning can provide by recommending that peer learning is offered on block field placements (RCSLT, 2021).

1.1.5 Challenges Experienced by Students on Block Field Placements

Block field placements can be a challenging time for students. The learning demands are high, and it can be a period of high stress. The learning demands of block field placement can be considered in terms of cognitive load theory (Sweller, 1988; Sweller, 2011). Cognitive load is considered the combined effect of intrinsic load (the difficulty of learning the task itself), extraneous load (how information is presented to learners) and germane load (related to process implemented by learners to create schema) (Sweller, 1988; Sweller, 2011). When cognitive load is higher, learners experience difficulties connecting new information with existing schemata. As information becomes less novel, students develop more schematic representation of their learning and can process more complex information as single

elements. Research has explored the effect of cognitive load on clinical learning in international students particularly (Attrill et al., 2015). Field block placements provide learning tasks with high intrinsic cognitive load – information related to clients, the organization, relationship with their supervisor, and competency development. These tasks introduce many new elements to be processed simultaneously. High levels of cognitive load can affect students' clinical performance while also reducing capacity to engage in activities to support germane load and learning (Sewell et al, 2019). In this way, the cognitive load of a block field placement can pose a significant challenge for students.

At the same time, students may also experience increased stress. Block field placements can be a source of stress due to the dynamic learning environment, which is less structured and less predictable than lectures (Deasy et al., 2016; Doggrell & Shafer, 2016). Additionally, students experience a variety of stressors during clinical placements, such as financial pressure, anxiety about ability to perform clinical tasks successfully, perceptions of mastery of clinical skills, self-expectations, and generalized anxiety or stress (Chan et al., 1994; Quigly, et al., 2020). Improved time management, increased organizational skills, the use of personal coping strategies, and the support of peers may assist in counter-affecting the effects of stress (Davenport et al., 2018; Quigley et al., 2020).

1.1.6 Shortage of Block Field Placements

In recent decades, increases in the number of SLT students and a shortage of block field placements has created strain on clinical education resources (Sheepway et al., 2014; SPA, 2018). In an analysis of clinical placement offers made by SLT services in the UK, two southern university SLT programmes received less than 50% of the offers they needed

annually (Gascoigne & Parker, 2001). The analysis revealed a shortfall in commitment to clinical education between services which could not be attributed to staffing alone, however did not explore the reason for the shortfall. Possible reasons for the international difficulty in securing block field placements were described by McAllister (2005); changes in workplaces of speech-language therapists, continued use of dated approaches to clinical education, and insufficient preparation and support for field supervisors. The RCSLT recently changed its policy regarding field supervision, referred to in documentation as "Practice-based Learning Guidance" and called upon RCSLT members to commit to providing 25 days of field supervision to SLT students per year (RCLST, 2021).

In an exploration into the limited exposure of physiotherapy students to acute health services, Ladyshewsky (1995) postulated that when staff shortages exist, services may refuse to accept students due to concerns of the effect clinical training might have on institutional productivity. Students are often perceived to increase the workload of the field supervisor and decrease productivity, described in literature as time spent in direct clinical activity. (Holland, 1997; Wright, et al., 2013). A recent investigation of speech-language therapists' perceptions of the impact of field supervision showed that some clinicians do perceive students to negatively affect their ability to complete clinical tasks, while other clinicians felt students had a positive effect on time spent in clinical care (Bourne et al., 2019). The speech-language therapists surveyed commonly reported experiencing increased stress while providing field supervision, though this was not a universal experience. The authors developed a model of influences on the impact of SLT students, noting that clinician factors, workplace factors, supervision practices, and student factors interacted with each other to result in the perceived student impact.

In reality, student placements do not appear to negatively affect the amount of direct clinical care clients and patients receive. Productivity of student placements has been an area of research across allied health clinical education studies since the 1980s, with results of the research in agreement that student field placements do not significantly change the amount of clinical time clients receive; the time a field supervisor may spend in direct clinical activities may reduce but this is offset by the additional direct clinical activity time generated by the student(s), with some studies identifying a net increase in productivity particularly associated with placement length or groups of students on placement together (Ash et al., 2015; Bourne et al., 2019; Hughes & Desbrow, 2010; Ladyshewsky, 1995; Ladyshewsky et al., 1998; Rodger et al., 2011). The result of increased productivity, as measured through hours of direct client activity, means students can increase the treatment dosage that clients can receive through increased frequency or extended duration of therapy sessions (Sokkar et al., 2019).

One recent study explored the effect of SLT field placements on productivity within public health services specifically (Bourne et al., 2019). The results showed that speech-language therapists in public health services can provide student supervision without compromising available time/activity in patient care, however SLTs spend less time in administrative tasks during some placement periods. This was a similar result to investigations into productivity of physiotherapy student on block field placements health settings, which identified the field supervisor may spend less time in direct contact with patients however the amount of patient care provided by students compensated for this reduction in field supervisor productivity (Ladyshewsky et al.,1998). Occupational therapy placements yielded a similar finding (Rodger et al., 2011).

Although studies suggest that students do not negatively affect time spent in patient care, productivity continues to be a current concern for speech-language therapists. Speech-language therapists in American healthcare settings in particular often have high productivity targets. Respondents to a 2016 American Speech and Hearing Association (ASHA) survey reported having mean productivity targets (defined as percentage of time spent in direct patient care) to be 80.2% (ASHA, 2016). An earlier survey of ASHA members in outpatient and inpatient clinical settings identified that respondents spent 73% of their time in direct clinical contact, 20% in indirect clinical activity (reports, progress notes) and 6% in 'other' (ASHA, 2014). This has not changed significantly since 2011, when a similar survey found 75% of therapist time was spent in direct contact. The speech-language therapists surveyed by ASHA in 2013 also completed a survey on their perceptions of being pressured to increase productivity by engaging in clinically inappropriate activities. 71% of respondents replied "no" while 14% said "yes" in regard to providing unnecessary or inappropriate frequency of input, and 8% reported feeling pressure to provide services which were not clinically appropriate in order to meet productivity targets. Acknowledging that some clinicians perceive field supervision to negatively affect productivity and stress levels, clinicians perceiving themselves to be already struggling to meet productivity targets might be disinclined to volunteer to supervise a block field placement due to concerns that their productivity would drop further while supporting and training an SLT student (Bourne et al., 2019). It can therefore be hypothesised that concerns about productivity are in part contributing to the shortage of speech-language therapy block field placement offers.

1.1.7 Development of Novel Clinical Education Models

Shortage of block field placements is not unique to SLT. Concerns have also been raised about the number and quality of placements in nursing, social work, and physiotherapy

(Claeys et al., 2015; Ladyshewsky, 1995; Neden et al., 2018). The shortage of block field placement offers has led educators and researchers to consider other avenues for students to develop competency such as simulated learning experiences or non-traditional placement options (Briffa & Porter, 2013; Gascoigne & Parker, 2001; Kersner & Parker, 2001; McAllister, 2005).

In the Flanders region of Belgium, these concerns have led to the implementation of new block field placement concepts in nursing. Claeys et al. (2015) conducted a non-randomised control study comparing the development of student competence and learning cultures across traditional clinical placements and two new concepts. In this study, a traditional clinical placement included a group of mentors being jointly responsible for the supervision of 1-9 students within a hospital, residential care facility, or psychiatric hospital for four weeks. The first new concept was a 'dedicated education center', where a group of 3-4 students received 1:1 supervision on a block field placement of 8 weeks. The other new concept was "workplace learning" and in this condition a group of 8-16 students took full responsibility for the organization of a nursing department for 2-5 weeks, supervised by 2-4 mentors. Students completed pre- and post-placement questionnaires that evaluated competency, learning opportunities, and clinical placement features. Students made greater gains in competency and received a wider range of learning opportunities in the new concepts, which appeared to allow greater autonomy than traditional placements. However, as has been the case in other studies, traditional placements still received the highest scores when it came to learning culture. The disparity between ratings suggests that the perceived effectiveness of traditional placement concepts in achieving student competency may not be accurate.

In Australia, researchers explored the opportunities that simulated cases or standardized patient clinics hold for developing students' clinical skills. A study by Hill, Davidson and Theodoros (2013) explored undergraduate and postgraduate SLT students' perceptions of simulation to identify if experience with standardized patients (actors trained to portray a particular case in a high-fidelity setting) helped decrease anxiety about interactions with real clients and increase the students' confidence in their clinical skills. This study utilized a pre-post design. 131 undergraduate students and 44 first-year graduate students participated in the design, which saw them complete a standardised patient clinic aiming to develop "foundational skills" such as communicative interactions, interviewing skills, and case history taking. For all students, this experience was the first clinical experience within their degree. Students completed the clinic in groups of 6 over 6 weeks (6-12 sessions in total). Prior to the beginning of the clinic, students filled a pre-survey with a 4-point ordinal scale answering questions about their levels of anxiety and confidence with particular tasks which was then repeated at the completion of the clinic. The results showed a significant decrease in the anxiety levels of undergraduate students and significant increases in confidence in ability to undertake clinical tasks (8/8 tasks for undergraduate students, 5/8 clinical tasks for graduate students), and for the undergraduates a significant negative correlation of small-moderate strength between level of anxiety and level of confidence for all clinical tasks was obtained (only significant in 1 task, identifying key clinical information, for graduates). The researchers concluded that simulations can be viewed as an effective method of teaching pre-clinical or foundation skills to students early on in their training, in SLT specifically but also across the wider allied health disciplines. Hill et al. (2021) later completed a randomized control trial that confirmed SLT students could achieve a comparable level of competency when a portion of their traditional placement was replaced with simulation.

Another study conducted in Australia also showed simulation to be successful in the self-reported development of knowledge, skills and confidence of SLT students (Quail et al., 2016). This study compared the development students' communication skills through interaction with three types of communication partners: a trained patient actor, virtual patient, or a patient in a nursing home. Although all three conditions resulted in significantly higher communication skills, knowledge and confidence, only the traditional model in which students visited the patient in a nursing home resulted in reports of higher empathy. This was suggested to be because actual clients are more likely to raise emotive topics.

Novel clinical placements are not only being suggested as avenues to meet the specific needs of students. Across allied health, the continued preference for block field placements despite ongoing shortages of offers and co-occurring demands on health services has led to the emergence of placement models which can serve dual purposes of increasing placement capacity and addressing gaps in healthcare services (Finch, et al., 2013; Jones et al., 2015; Nicole et al., 2014).

1.1.8 Client Perceptions of Block Field Placements

Exploration of client perceptions of having students involved in their healthcare have generated positive results. Clients have expressed positive experiences receiving health services from students which were free (Asanad et al., 2018; Lawrence et al., 2015) and had a fee (Forbes & Nolan, 2018). Recently, a study was conducted that explored client satisfaction with students in the delivery of SLT private practice (Sokkar et al., 2019). The participants of this study were 17 parents or caregivers of children who had received SLT student input through a clinic-based or school-based private practice. The participants answered survey

questions that included a mix of forced-choice, rating scales, and open-ended items intended to explore their experiences of SLT student input including specific questions pertaining to client satisfaction and perceptions of effectiveness of the treatment received. Private practitioners' perceptions that clients would be unsatisfied with student involvement has been a barrier to the providing block field placements within private practice historically (Sokkar & McAllister, 2015). However, the responses of clients in Sokkar and colleagues' study (2019) found that clients were satisfied with the treatment they received. Clients reported viewing the SLT students as competent and professional. Additionally, clients reported valuing the increased access to services the SLT students provided and also appreciating the different approaches and perspectives students brought to treatment. Finally, the clients surveyed acknowledged the importance of the students gaining clinical and were supportive of clinical education (Sokkar et al., 2019).

1.2 Intensity of Speech-Language Therapy in Post-Stroke Populations

As stated above, SLT students are required to receive academic and clinical instruction to enable them to reach "Entry-Level" competency by the completion of the final year of study, that is, possessing the specialist knowledge and skills to enable them to successfully enter the profession (NZSTA, 2018b; NZQA, 2003; SPA, 2001). This requires instruction and exposure to paediatric and adult populations, with communication or swallowing impairments resulting from developmental or acquired pathologies. Acquired communication and swallowing impairments can arise from neurological disease such as stroke, and as such, SLT students often encounter clients with a stroke history in campus and field clinical experiences.

In recent decades, researchers in stroke rehabilitation have been particularly interested in identifying the most desirable treatment schedules for patients post-stroke. This has led to a significant amount of work exploring the effects of different treatment intensities across a range of health disciplines, disorders, and therapy approaches. In describing treatment intensity, it is important to clarify between treatment dose (the number of times stimuli are presented within a session or length of session in minutes/hours), session frequency (how often treatment is provided, usually in terms of number of sessions per week), duration (the length of time intensive treatment is provided) and the total dose or cumulative intervention frequency (the total number of treatment sessions provided, or total amount of time spent in therapy sessions) (Roth & Worthington, 2019). With regards to treatment intensity in post-stroke populations, session frequency is the main aspect of intensity being explored.

Two models of considering the effect of treatment intensity have been proposed. Treatment intensity is rather better understood in motor recovery models of neuro-recovery, which suggest that the greatest potential to harness spontaneous recovery exists in the first 90 days post-injury and that intensive treatment in the form of high frequency repetition has the ability to strengthen neural networks to result in improved function (Hermann & Chopp, 2012). From this point of view, high treatment dose and high session frequency are the important variables of intensity.

A contrasting theory arising from cognitive psychology research is that distributed practice (lower frequency of sessions) may result in better long-term retention of knowledge or skills (Dignam et al., 2016; Pierce et al., 2019). From this point of view, distributed practice over a lower session frequency but possibly longer duration to achieve comparable total cumulative

intervention frequency may be more important variables of intensity. Comparisons between higher intensity and distributed practice treatment programmes are beginning to be explored in aphasia and motor speech treatments (Dignam et al., 2015, 2016; Wambaugh et al., 2018; Wambaugh et al., 2020).

1.2.1 Recommended Treatment Intensity in SLT Following Stroke

Research into overall stroke rehabilitation indicates that increased frequency of treatment results in improved health outcomes for stroke survivors. However, the effect of intensity on recovery of communication disorders secondary to stroke continues to be an area of investigation. Stroke can result in disturbances to language (aphasia), planning of speech movements (apraxia of speech) and execution of speech movements (dysarthria), in addition to changes in swallowing function (dysphagia). It is not yet well understood whether treatment for aphasia can be expected to follow the motor-recovery of neuro-recovery or the cognitive psychology model of learning, some combination of both, or neither.

Research into the effects of intensity on aphasia treatment specifically have provided mixed results. Reviews of the literature conducted in the 2000s provided evidence that higher session frequency and higher cumulative intervention frequency resulted in better outcomes for persons with aphasia. Bhogal, et al. (2003) analysed clinical trial outcomes and identified that the studies which had achieved significant aphasia treatment effects provided an average of 8.8 hours of therapy per week for 11.2 weeks. This review also identified that more frequent treatment had not only more positive outcomes but also a significantly shorter duration than "non-intensive" or less frequent treatment, which was on average 2 hours of therapy a week for 22.9 weeks, while maintaining a significantly higher cumulative intervention frequency (98.4. hours compared to 43.6 hours). The authors concluded that dose or weekly frequency of

sessions (8.8 hours) and a higher cumulative intervention frequency (98.4 hours) were important features of treatment intensity in aphasia management, while duration could be shorter (11.2 weeks) and still achieve successful outcomes.

Another review of data on frequency and duration of aphasia therapy (Basso, 2005) also concluded that the cumulative intervention frequency of SLT sessions is important. The number of sessions clients with aphasia received was found to have a significant effect, with people who received a higher number of sessions achieving greater recovery than those who received a lesser number, regardless of the time period over which the sessions were provided, suggesting cumulative intervention frequency was more indicative of a successful outcome than session frequency or duration.

Research conducted in the 2010s did not conclusively confirm these earlier findings. Cherney's (2012) study into frequency effects had contrasting results to Basso (2005), identifying that language treatment needed to be provided at a dose of 5 hours per week for several weeks to have any efficacious outcome. A Cochrane review completed in 2016 aimed to provide some clarity about the current evidence-based for treatment intensity in aphasia management (Brady et al., 2016). This review identified that the evidence for high intensive aphasia service post-stroke was continuing to grow. The review defined "high intensity" as 4-15 hours per week, though optimal elements of dose, frequency, duration, and cumulative intervention frequency continued to be unclear (Brady, et al., 2016).

A later randomised controlled trial conducted in Germany identified possible ceiling effects of dosage (Stahl et al., 2018). In this study, persons with chronic aphasia (>1 year post onset) were randomized into two groups. Group 1 received a 4 hour session three times a week (a total of 12 hours a week) for 4 weeks (cumulative intensive frequency 48 hours) while. Group 2 received a 2 hour session three times a week (6 hours a week) for 4 weeks (cumulative

intensive frequency 24 hours). Both groups were assessed two weeks prior to intensive treatment, at midway (2 weeks into intensive treatment) and at the completion of the treatment. Participants received group therapy of Intensive Language-Action Therapy (ILAT), a form of constraint-induced aphasia treatment with verbal language treatment tasks. A standardized aphasia test battery revealed that all participants made significant and clinically relevant progress after receiving intensive group ILAT, regardless of the intensity level applied. The authors suggested that there may be a limit on how much time spent in SLT per day is effective (Stahl et al., 2018). However they cautioned against interpreting the results as showing that intensity was not a factor in recovery in chronic aphasia, noting that the less intensive group received 6 hours of treatment per week, which the authors reported was significantly higher than could be provided by contemporary SLT services. Of significance also was the comparison between test scores at the midway point and end point of the treatment, which suggested that increasing the duration of treatment by 2 weeks contributed to improved scores on the outcome measures. The results of this study therefore show a possible ceiling effect of daily dose or weekly frequency of treatment, while acknowledging that duration of treatment can increase effectiveness.

Currently, the role of intensity in aphasia treatment remains undefined. Optimal dose, session frequency, duration and cumulative intensity frequency continue to require investigation. Limiting the evidence base to date has been different methodologies employed in studies, including different treatment approaches and outcome measures. Queries about the role of intensive treatment at different phases of recovery (i.e. acute versus chronic aphasia) have also arisen. A recent 2020 meta-analysis of intensive aphasia cautioned that focusing only on session frequency may be a reductive approach to investigating the effects of intensity on aphasia recovery (Harvey et al., 2020). This meta-analysis also identified that studies on dose and frequency in aphasia treatment continue to produce inconclusive results, with findings of

studies difficult to compare due to different methodologies. Harvey et al. (2020) concluded that higher doses of aphasia therapy may be associated with diminishing returns or ceiling effects, however more research is required to examine the correlation between aphasia severity and treatment dose.

Another recent meta-analysis reviewed the effects of session frequency on outcomes in chronic aphasia (Pierce et al., 2020). This systematic review identified low frequency intensity as being less than three hours of SLT a week, while high frequency intensity was between 3-16 hours per week. The results of the review suggested that both low and high frequency treatment schedules resulted in change for people with chronic aphasia at impairment level, and were inconclusive as to whether high or low frequency was preferable. Therefore, it continues to be unclear whether aphasia management is more efficacious following a motor-recovery model of neuro-recovery, or distributed practice as identified as an effective way to learn complex skills and knowledge in cognitive psychology.

For other communication disorders post-stroke, the evidence base on intensity effects is also unclear. One study examining the effects of dose frequency on outcomes of Sound Production Treatment (SPT) for acquired apraxia of speech found that a less intense, distributed application of SPT resulted in better maintenance of improved motor speech production of untreated items (Wambaugh et al., 2018). A further study into the effects of intensity on SPT found that dose frequency and cumulative treatment intensity did not appear to affect treatment outcome in an apraxia of speech (Wambaugh et al., 2020). This study compared outcomes of articulation accuracy between traditional non-intense SPT (1 hourly session per day, 3 days per week) and intensive dose frequency (3 hourly sessions per day, 3 days per week), and found no significant differences between the two conditions.

Mirroring the contradiction in the evidence base, international best practice guidelines provide varying recommendations regarding the optimal level of intensity post-stroke. International practice recommendations for stroke rehabilitation are not presently available but are being developed by the World Federation for NeuroRehabilitation (WFNR) (Platz, 2019). American and Canadian guidelines recommend that people with aphasia should be provided intensive treatment but provide no explicit guidance in regards to timing, frequency, duration or cumulative intervention frequency targets (Hebert et al., 2016; Winstein et al., 2016). Australian guidelines are more specific and recommend the provision of 45 minutes of speech-language therapy 5 days a week if tolerated by the person who has had the stroke (Stroke Foundation, 2020). The UK guidelines are more specific still, recommending 45 minutes of speech-language therapy 5 days a week, and clarifying that people who are able to tolerate more should be provided with sessions longer than 45 minutes in length, while those unable to tolerate 45 minutes of therapy should continue to be offered shorter therapy session 5 times a week (National Clinical Guideline Centre, 2013). None of the guidelines from the UK, USA, Canada or Australia provided any recommendation regarding the desired intensity specifically for dysphagia or motor speech therapies.

In the NZ context, views on the importance of intensity are reflected in the best practice guidelines for stroke developed by the Stroke Foundation of NZ and NZ Guidelines Group (2012) which state "for patients undergoing active rehabilitation, as much therapy for dysphagia or communication difficulties should be provided as they can tolerate." More specific guidance is provided in the Minimal Standards for Community Stroke Rehabilitation Services which states;

> "minimum Ministry of Health expectations to meet the designation of 'community stroke rehabilitation service' [include the]… ability to deliver up to three sessions a week of physiotherapy, occupational therapy, or speech-language therapy as needed in the first four weeks of the community rehabilitation programme to work towards patient/family/whanau goals." (NZ National Stroke Network, 2017)

However, this guidelines does not meet with the aphasia literature definition of high frequency intensity. In the absence of comprehensive and conclusive findings about intensity in the literature, this recommendation does provide clinicians with some guidance.

1.2.2 Current Reality of Access to Intensive Aphasia Treatment in New Zealand

As described above, the NZ best practice guidelines for stroke encourage services to provide as much therapy for swallowing and communication difficulties as can be tolerated, with community stroke rehabilitation services expected to be able to deliver up to three sessions a week for at least four weeks (NZ National Stroke Network, 2017; Stroke Foundation of NZ & NZ Guidelines Group, 2012). As has been described, reviews of intensity in communication disorders post-stroke provide contradictory and inconclusive recommendations about dose, session frequency, duration and cumulative frequency factors of intensity but generally suggest 3 hours of SLT per week or higher can be effective (Bhogal et al., 2003; Brady et al., 2016: Basso, 2005, Pierce et al., 2020; Stahl et al., 2018; Wambaugh et al., 2020).

However, the recommendations of research and Clinical Guidelines are often not achieved in practice (Code & Petheram, 2011). One audit of a NZ community stroke service identified that clients typically received two direct SLT sessions, each an average of 60 minutes in length, over the course of 57 days (Yeo et al., 2016). This retrospective audit contained a small sample

size and conducted a relatively limited investigation into the provision of community speech-language therapy. Acknowledging these limitations, the findings described significantly reduced provision of dysphagia and communication treatment than recommended in the minimal standards and best practice guidelines quoted above. The authors cautioned that guidance on duration and intensity of community therapy is limited due to the heterogenous nature of stroke and its effects (Yeo et al., 2016).

Yeo and associates' (2016) findings are not unique, nor is the issue of providing intensive treatment or indeed access to treatment unique to NZ. A review of SLT provision in Australia identified clients with aphasia received on average 2 hours or less of therapy per week in outpatient and community services (Verna et al., 2009). In comparison, an older review of outpatient/community SLT in the USA identified that services provided a mean of 9 SLT sessions per client in total in outpatient and community settings (Katz et al., 2000). A number of studies have shown that aphasia treatment is not typically provided at any level approximating the session frequency, duration or total dose amount suggested in research as being necessary to cause significant change (Bhogal et al., 2003; Code & Heron, 2003; Katz et al., 2000; Kurland et al., 2010; Pulvermuller & Berthier, 2008).

1.2.3 Barriers to Implementing Intensive Treatment

Challenges to the implementation of evidence-based practices into usual practice have been explored in literature and have been identified as being clinician factors, environmental factors, and patient/client factors. Clinician factors can include level of skill, clinician confidence, and ability to research and implement new techniques (Babbitt et al, 2013; Rose et al., 2014; Shrubsole et al., 2018). Environmental factors can include caseload demands,

staffing levels, travel time and access to resources such as clinical space (Rose et al., 2014; Shrubsole et al., 2018). Client factors can include impact of fatigue, expectations of therapy, and readiness for rehabilitation ((Bakheit et al., 2007; Gunning et al., 2017; Rose et al, 2014; Shrubsole et al., 2018).

A recent study that explored this issue in regards to intensive treatment conducted a qualitative enquiry into barriers providing novel aphasia treatment (Trebilcock et al., 2019). This study recruited speech-language therapists into focus groups to explore barriers to implementing intensive treatment, comprehensive treatment, and Intensive Comprehensive Aphasia Programmes (ICAPS) a relatively new model of aphasia therapy delivery. Participants were 34 speech-language therapists from 6 countries; NZ, Australia, Canada, the USA, the UK, and Ireland. Participants reported that aphasia compromised 25-75% of their total caseloads and all had at least 12 months experience working in aphasia management. The same 5 key factors were identified to affect the ability to implement all three service delivery types. These factors were the environmental context and resources, beliefs about consequences, social/professional role and identity, skills, and knowledge. The focus groups acknowledged the role of collaboration, advocacy, culture and innovation in influencing a change in aphasia practices through their effect on barriers and facilitators. The authors stated their intention is to use the findings from this study to facilitate the development of an intervention targeting the intensity and comprehensiveness of aphasia services across multiple countries to attempt to reduce the evidence-practice gap (Trebilcock et al., 2019.)

Research on ICAPS over the past several years provides some additional insights into clinicians' experiences and perceptions of intensive SLT treatment. ICAPS provide a

minimum of 3 hours of therapy a day for 2 weeks and utilize a variety of treatment approaches, include client/family education, and target both impairment-based and participation/activity levels of functioning (Babbitt et al., 2013; Trebilcock et al., 2019). Seven SLT who had participated in ICAPS were interviewed in an exploratory qualitative study that aimed to describe the clinician experience of working in an ICAP (Babbitt et al., 2013). The SLT described rewards of conducting intensive therapy included developing stronger relationships with and between persons with aphasia and families, seeing progress, learning, and support. The challenges of ICAPS included challenges with time, such as time spent planning therapies, meeting with other clinicians to discuss clients and treatment approaches, and reading current research articles about evidence-based practice. Other challenges were related to client characteristics, such as managing the expectations of clients, and returning to usual clinical settings where intensive therapy was not accessible.

SLT perceptions of delivering high intensity aphasia treatment in in-patient hospital settings were explored in a study (Gunning et al., 2017). Clinicians reported that intensive treatment models resulted in stronger patient-clinician relationships due to the amount of time spent together. Additional benefits for clinicians were reported to be enhanced collaboration with colleagues and the development of clinical skills or professionalism, while perceived benefits for clients included the development of client-client relationships through group or waiting room interactions and the development of client confidence. Reported barriers to providing intensive treatment in hospital settings included patient fatigue, patient personal factors (such as physical endurance and motivation), locating resources to keep therapy interesting and challenging, scheduling and coordination issues, clinician workload, and potential burn-out. Challenges for clinicians included professional boundaries, with some clinicians perceiving

that it was more difficult to maintain professional boundaries in intensive treatment. Gunning et al. (2017) identified that in intensive treatment, like social aphasia groups contexts, a shift in boundaries may occur and it is important to raise awareness and reflect on this shift (Sherratt & Hersh, 2010).

Barriers to providing intensive rehabilitation post-stroke exist across allied health. One study of barriers was conducted in physiotherapy identified that staffing and access to resources limited their ability to provide intensive treatment, though the physiotherapists interviewed described their belief that intensive physiotherapy was effective for their post-stroke patients (Janssen et al., 2020).

1.2.4 Timing of Intensive Treatment Provision

Timing of access to intensive treatment post-stroke has been raised as a consideration. Clients who have sustained a stroke are undergoing significant adjustment as they process changes in physical and cognitive abilities alongside possible social or vocational changes, which may prevent or delay engagement in treatment programmes (Pierce et al., 2020). For example, in a randomized control study of intensive aphasia treatment in the acute phase, patients within the intensive treatment arm of the study had a significantly higher drop-out rate (Barkheit et al., 2007). The researchers reported that the drop-out rate was the result of patients with aphasia being too ill or refusing to continue to participate in treatment. High rates of drop-out from intensive treatment were also found in the acute and subacute phases in another study of intensity, however no significant difference in drop-outs were observed between higher and lower intensity treatments in chronic aphasia (Brady et al., 2016).

However, in aphasia treatment, delayed presentation of intensive treatment may not necessarily be negative. A recent randomized, single-blinded trial (RCT) conducted at 17 acute-care hospitals across Australia and NZ explored communication recovery between usual care and two higher intensity regimes (an additional 20 sessions of either non-prescribed treatment or prescribed VERSE treatment) on top of usual care (Godecke et al., 2020). The results of this RCT found that early intensive aphasia therapy (in which patients received approximately 9 hours of treatment per week) did not improve communication recovery significantly more than usual care (in which patients received approximately 3 hours of treatment a week) within 12 weeks post-stroke, with the majority of participants achieving significant, clinically meaningful gains in language recovery. Wertz and associates' (1986) identified that delaying treatment to 12 weeks post-stroke did not compromise the therapy outcome for people with aphasia.

Additionally, the 2016 Cochrane review indicated that aphasia is effective for chronic communication impairment (Brady et al., 2016). Studies showing the benefit of intensive SLT treatment, defined as greater than 5 hours of language therapy a week, for people with chronic aphasia (Barthel et al., 2008; Kurland et al., 2010; Meinzer et al., 2004; Meinzer et al., 2005; Pulvermuller & Berthier, 2008). Conversely, a more recent review of aphasia treatment in the chronic phase of recovery found that low frequency treatments (<3 hours per week) and high frequency treatments (3-16 hours per week) both resulted in improved outcomes, with neither level of intensity being definitely more effective than the other (Pierce et al., 2020).

1.2.5 Client Perspectives of Intensive Treatment Post-Stroke

While high intensity therapy has been associated with higher rates of client drop-out, exploration of clients' perspectives of intensive treatment have generally been favourable (Barkheit et al., 2007). This is demonstrated in the results of a recent study that explored the perceptions of intensive physiotherapy post stroke (Janssen et al., 2020). In this study, 10 patients who had recently had a stroke received intensive physiotherapy of one hour sessions, once or twice a day, five days a week, for four weeks. In post-treatment interviews, the patients displayed a positive attitude towards hard work and reported being satisfied with high intensity intervention. Patients placed particular emphasis on the benefits of the therapeutic relationship. They perceived no barriers towards implementation of higher intensity treatment in practice although acknowledged that participating in the treatment programme was challenging due to the nature of the treatment tasks. Janssen et al. (2020) also interviewed the patients' physiotherapists as part of the study. The physiotherapists' responses shared the perception of intensive rehabilitation as being beneficial, but found system level aspects, such as staffing and access to necessary resources, to be barriers for further implementation. People with aphasia have also expressed their desire to have greater access to SLT. People with aphasia interviewed by Worrall et al. (2011) described wanting SLT that was more frequent and of longer duration. The evidence base therefore suggests that clients both want and need more access to SLT post-stroke than is often provided.

1.2.6 Current Situation

The current situation is one in which block field placements are still a desirable way for students to develop competence and confidence, and intensive treatment is a desirable and

effective way to provide swallowing and communication therapy post-stroke, but barriers to accessing either of these services in the field continue.

Previous research has identified that block field placements have benefits to the service in which they occur. Block field placements can therefore serve dual purposes of providing students with learning opportunities while addressing gaps in healthcare services such as access to more treatment (Jones et al., 2015; Finch et al., 2013; Nicole et al., 2014).

1.3 Research Questions

This study aimed to explore the effect that providing intensity therapy to clients with communication and swallowing impairments post-stroke may have on the development of competency and confidence with SLT students, and also to explore the experiences of clients who received intensive treatment provided by an SLT student.

The specific research questions were:-

1. What effect does intensive service provision have on the development of clinical competency and confidence and reduction of anxiety for third- and fourth-year SLT students?
2. What are clients' perceptions of intensive therapy services provided by students?

It was hypothesized that students would develop their clinical competency similarly to peers providing less intensive services, that as student anxiety will decrease as competency and confidence increase, anxiety will decrease, and that clients would have favourable perceptions of intensive therapy services provided by students.

2. Methods

This chapter describes all methodological aspects of the study. This includes participant information, recruitment, data collection, and data analysis techniques.

2.1 Ethics Approval

Ethical approval was obtained from the University of Canterbury (UC) Human Ethics Committee prior to commencing the study (see Appendix 1 for copy of approval letter). This process included consultation with the Ngāi Tahu Consultation and Engagement Group. Informed consent was gained, data stored to ensure participant privacy, and confidentiality was maintained throughout the project. Signed permission was received from the Service Manager of the community service prior to approaching clients regarding this study (see Appendix 2).

2.2 Participants

This study involved two participant groups; speech-language therapy (SLT) students and clients (adults with communication impairment following stroke).

2.2.1 Eligibility Criteria

The student participants were undergraduate students enrolled in the third- or fourth-year of the Bachelor of Speech-Language Pathology (BSLP Hons) who were involved in a block

field placement within a community-based SLT service that provided intensive therapy to adult clients. The student participant eligibility criteria included;

- Enrolment in full-time study as a student in the third- or fourth-year of the BSLP Hons degree;
- Participating in a block field placement within an SLT service utilising an intensive therapy approach

Seven students consented to participate in the study. All seven were in the fourth-year of the BSLP (Hons) degree. The age range of participants was 21 years to 29 years. The median age was 22 years. All student participants were female. International students (students attending university on a NZ study visa) comprised 43% (3) of participants with the remaining cohort being domestic students (NZ citizens or residents) (4).

The client participants were adult clients (aged over 18) receiving intensive community-based speech-language therapy. For the purpose of this study, intensive community-based SLT is defined as three or more speech-language therapy sessions a week in a home residence or care facility (NZ National Stroke Network, 2017). Clients were invited to participate if they had recent experience of intensive treatment with student involvement. The client participant eligibility criteria included;

- Current or recent participation in intensive SLT,
- A diagnosis of stroke-related acquired communication or swallowing impairment;
- Had a BSLP Hons student involved in their intensive treatment within the last three months.

Twelve client participants consented to participate in semi-structured interviews. Two participants withdrew for unrelated medical reasons. 50% of participants were female and 50% were male. 50% of client participants were seen in the subacute phase of rehabilitation, within 6 months post stroke (Godecke et al., 2020), while the other 50% were in a more chronic phase of rehabilitation, being over 12 months post injury. A profile of participants is provided in the table below;

Table 1

Client Participant Profile

Client Number	Client Pseudonym	Intervention Provided for	Intensity of Intervention	Time Post Onset	Ethnicity
CP01	Kenneth	Dysphagia Aphasia	3 x 60 minute sessions per week, for 6 weeks	> 6 months	NZ European
CP02	Gavin	Aphasia	3 x 60 minute sessions per week, for 8 weeks	<12 months	NZ European
CP03	Kim	Aphasia Apraxia of Speech	3 x 45 minute sessions per week, for 8 weeks	> 6 months	NZ European
CP04	Maureen	Aphasia	3 x 60 minute sessions per week, for 6 weeks	> 6 months	NZ European
CP05	Talia	Aphasia Dysphonia	3 x 60 minute sessions per week, for 8 weeks	< 12 months	Samoan
CP06	Nikau	Aphasia	3 x 60 minute sessions per week, for 4 weeks	< 12 months	Māori
CP07	Colette	Aphasia	3 x 30-45 minute sessions per week, for 8 weeks	< 12 months	NZ European
CP08	William	Aphasia	3 x 60 minute sessions per week, for 8 weeks	> 6 months	NZ European
CP09	Rosalie	Aphasia Apraxia of Speech	3 x 30-45 minute sessions per week, for 8 weeks	> 6 months	NZ European
CP10	Chris	Aphasia	3 x 30-45 minute sessions per week, for 6 weeks	< 12 months	NZ European

2.2.2 Study Structure for SLT Student Participants

The structure of the student participants' recruitment and study experience is outlined in the table below;

Table 2

Structure of Study for Student Participants

Allocation to Block Field Placement: Student participants were allocated to block field placement as per the BSLP programme's usual process. This process involved the Director of Clinical Education of the programme receiving offers of block field placements. They then collate the offers with student preferences regarding geographical location and service setting. Finally students' previous clinical experiences and learning needs are reviewed by the Director of Clinical Education to ensure the clinical placement meets the needs of the student.
Recruitment Into the Study: At the commencement of the block field placement, a Clinical Educator external to the supervisory research team emailed the study's Student Information Sheet and Consent Forms (see Appendix 3). Participants were asked to email questions about the study to the researcher or submit a signed consent form to indicate their consent.
Pre-Placement Confidence-Competency Questionnaire: The week before block field placement began, student participants were emailed a link to the pre-placement version of the confidence-competency questionnaire (see Appendix 4, more detail below in 'Instrument' section) hosted on Qualtrics. Student participants were requested to complete the questionnaire within the next 14 days.
Completion of Block Field Placement: All students in the intensive community-based speech-language therapy placement, regardless of participation in research or not, received field supervision across their block field placement in accordance with the programmes' field supervision guidelines. Students attended block field placement for 40 hours a week Monday to Friday. The caseload was comprised of adults aged 18 and over with a diagnosis of swallowing or communication

impairment secondary to stroke. Students received direct clinical contact with clients with aphasia, dysarthria, apraxia of speech, and/or dysphagia across a range of severity of impairment and stage post injury. The specific make up of each students' caseload varied depending on the referrals and caseload of the service at the time of the block field placement however included a majority (>75%) of clinical contact being in the provision of intensive therapy. Students were expected to receive between 10-20 hours of direct clinical contact per week during this block field placement.

As part of usual practice, learning contracts were developed collaboratively between the field supervisor and the student to identify learning needs and establish each student's goals of the placement. Clinical education strategies utilised by the field supervisor included graduated practice (a progression from less complex clinical tasks to more complex clinical tasks as the student demonstrated capability), guided practice (providing instructions to guide the student while the clinical task is being completed) observations (including modelling and demonstrations) and the provision of daily feedback in written form and verbally in post-session debriefs. Students received a minimum of 5 hours per week of direct clinical education engaged in the above activities. A gradual change from direct to indirect clinical supervision was also undertaken as it became appropriate to do so, ensuring that at least 25% of each student's total contact with each client was under direct supervision as per ASHA supervision guidelines (ASHA, 2020). Formative assessment of competency was undertaken at the midway point (approximately week 5) and summative assessment was completed in the final week of placement (week 8 – 10). The COMPASS® competency assessment was used to assess competency.

Post Placement Confidence-Competency Questionnaire:

In the final week of block field placement, student participants were emailed a link to the post-placement version of the questionnaire hosted on Qualtrics (see Appendix 5) and were requested to complete the questionnaire within the next 7 days.

2.2.3 Study Structure for Client Participants

The sequence of events for client participants is described in the table below;

Table 3

Structure of Study for Client Participants

Enrolment in Service: Client participants were enrolled within a community-based speech-language therapy service as per health board procedures.
Development of Therapy Plan: Within the first week/s of input from the speech-language therapy service, and prior to involving an SLT student in the client's care, a preliminary therapy plan was developed between the client, family, and clinician as per workplace protocols. This involved the commencement of discussion of therapy goals and therapy options. Included in the discussion of therapy options was negotiation of intensity and the offer of SLT student involvement. Clients who consented to SLT student involvement completed their therapy planning through collaboration between the client, family, and SLT student under clinician supervision. This involved the establishment of appropriate therapy goals and discussion of therapy approaches. Clients who did not consent to SLT student involvement completed their therapy planning through collaboration with the clinician.
Notification of Study: Clients who consented to have SLT students involved were provided with initial study information (Awareness of Study Sheet for Clients and Families, Appendix 6) which

notified them that at the end of their therapy programme, the client would be invited to participate in a one-off interview lasting no longer than 1 hour exploring their experience.
Implementation of Therapy Plan with client and student SLP: Speech-language therapy was provided in accordance with evidence-based practice. Examples of therapies provided included Attentive Reading Constrained Summarisation (ARCS) (Obermeyer et al., 2021), Verb Network Strengthening Treatment (VNeST) (Edmonds et al., 2014), Semantic Feature Analysis (SFA) (Boyle, 2015). Sessions ranged from 30 - 60 minutes, 3-4 times per week.
Recruitment Into the Study: After the therapy had been completed as per usual care, full Patient and Family Information and Consent forms (see Appendix 7) were posted or emailed to potential participants. The Research Information for People with Aphasia (Appendix 8) which provided the information in aphasia-friendly ways, was sent alongside the Information and Consent Forms as needed. Those who wished to be involved returned their signed consent forms through post or email.
Semi-Structured Interview: Each client participant was contacted by the researcher to arrange a time and place for the one-off semi-structured interview. An interview-guide was provided to client participants who required this support via email (see Appendix 9 for interview guide). After the interview was completed, client participants were offered the opportunity to review the completed interview transcript.

2.2.4 Impact of COVID-19 Pandemic on Study Structure

In March 2020, the World Health Organisation declared the outbreak of a novel coronavirus labelled severe acute respiratory coronavirus 2 (SARS-CoV-2) to be an international pandemic of coronavirus disease, referred to as the COVID-19 pandemic (World Health Organisation, 2020). The virus was understood to be spread through aerosols or droplets from an infected person coming into contact with the eyes, nose or mouth of other people.

Symptoms ranged from mild to life threatening, with common symptoms including headaches, loss of smell and taste, cough, muscle pains, congestion, and breathing difficulty. For the majority (81%), infection with COVID-19 resulted in the development of mild symptoms, while in 14% of cases people developed severe symptoms (dyspnoea, hypoxia) and in 5% of cases people infected suffered critical symptoms (respiratory failure or multi-organ dysfunction) (Texler Hessen, 2020).

Responses to the COVID-19 pandemic varied. In New Zealand, the government implemented an alert-level system. This system consisted of four levels, with Level 1 being the least risk of infection and Level 4 being the highest risk of infection (Ministry of Health, 2020). New Zealand moved into Alert Level 4 at 11.59 pm on 25 March 2020 (Deguara, 2020). Level 4 consisted of a ban on non-essential travel, cancellations of gatherings, closures of education facilities and public venues, closures of businesses (excluding supermarkets, pharmacies, petrol stations, clinics, and lifeline services), reprioritisation of healthcare services, and people were required to stay at home with their household contacts (referred to in media and government announcements as a "bubble") except for essential personal movement (Ministry of Health, 2020).

The closure of education facilities and reprioritisation of healthcare services had implications for the students enrolled in the BSLP (Hons) degree including the cancellation of planned block field placements for third-year students. This resulted in the loss of data collection opportunities for third-year students within this study.

2.3 Data Collection

2.3.1 Instrumentation

Data was collected through the use of questionnaires, competency ratings, and semi-structured interviews.

2.3.1.1 Student Participant Confidence-Competency Questionnaire. A fit-for purpose pre-post confidence-competency self-rating questionnaire was developed based upon the Standardised Patient Clinic Survey questionnaire (Hill et al., 2013). The adaptations to the questionnaire involved altering references to "standardised patients" to "intensive clients" to reflect the change in context, and omitting original questions regarding the realism of simulated learning. In keeping with Hill's questionnaire, two versions of the questionnaire were developed: a pre-placement version and a post-placement version. The pre-placement questionnaire included 11 questions distributed across 2 sections. Example questions are "Please indicate on the following scale how anxious you feel about interacting with clients in general in clinical practice" (Appendix 4). The post-placement version included 11 additional questions further exploring the participant' experiences. For example, "Please indicate to what extent you agree/disagree with the following statements: My confidence to interact with other clients in the future has increased as a result of my interactions with intensive clients". The post-placement questionnaire also included the opportunity for open text responses such as "If you indicated you have learned a new skill, please provide an example in the space below" (Appendix 5).

The student participants were emailed links to the pre- and post-placement version of the questionnaire hosted on Qualtrics and completed these independently within the fortnight

spanning the week before the beginning of block field placement to end of the first week (pre-placement version) and within the last week of their block field placement (post-placement version).

2.3.1.2 Student Competency Assessment Ratings (COMPASS®). The student participants completed a competency based assessment as per the usual practice requirements for the block placement at mid-way (week 5-6) and end-point (week 10-12) of block field placement using the COMPASS® competency assessment tool. COMPASS® is a standardised assessment of competency development in SLT students in which the students' supervisors rate ability to perform professional and occupational elements of competency along a visual analogue scale ranging from novice to entry level. This assessment tool is used as standard in Australian and NZ undergraduate and postgraduate SLT programmes (McAllister et al., 2006).

2.3.1.3 Semi-Structured Interviews with Client Participants. Each participant was interviewed for approximately 60 minutes at the end of the therapy from the community SLT service. The interview took place at a time and location chosen by each participant (e.g. in their home, or through the use of Zoom-hosted videoconferencing). Client participants who had an activated Enduring Power of Attorney for Welfare (EPOA) were interviewed with their EPOA present, who was in all cases a close family member.

The interviews with the client participants followed a topic guide (see Appendix 9) that included the following topics:

1. Amount of therapy received

2. Stroke recovery and change in function
3. Progress to goals
4. Reflection on student involvement

Questions were open-ended and unscripted to support the researcher to respond to the clients' responses freely. Example questions include "Tell me about your experience with the student SLT" and "What did you think about intensive treatment?"

The researcher, a qualified speech-language therapist, used supported conversation strategies (Kagan, 1995) and the considerations raised by previous researchers in the realm of aphasia to support client participants to share their experiences despite a communication barrier (Johansson et al., 2012; Luck & Rose, 2007; Wilson & Kim, 2019). These strategies included;

- Writing down keywords on paper to use as a communication support;
- The use of images relevant to the research questions to use as visual aids;
- Probing of elicited information with yes/no questions or rephrasing to verify what the client participants have reported;
- Pausing to provide silence for extra processing time;
- Providing an interview guide in advance of the interview to provide an opportunity for the client participants to prepare any ideas they may want to talk about during the interview;

- Including the EPOA or support person if the client participant so choses, with particular care taken to give the client participant the opportunity to give their perspective on any ideas the EPOA/support person may raise;
- Modifying the interview approach to accommodate the client participants' communication difficulties (e.g. altering the questioning style).

2.4 Data Analysis

A mixed-methods data analysis was completed. The approach included descriptive statistical analyses of questionnaire results and COMPASS® ratings, content analysis of open text descriptions, and reflexive thematic analysis of semi-structured interviews.

2.4.1 Pre-Post Block Field Placement Questionnaire Responses and Assessment Ratings

To evaluate SLT student participants' self-perceptions of confidence and competence while engaged in intensive therapy with their clients, student participants' ratings of anxiety and confidence within the Student Clinical Confidence-Competence Questionnaire were analysed using descriptive statistics to report the means and standard deviations of responses. A paired *t* test was considered however due to the small sample size and the limited variation in responses, the model would generate small *p* values with limited meaningful interpretation.

Student participants' open text descriptions of clinical competence were analysed via content analysis, whereby shared patterns of meaning were identified.

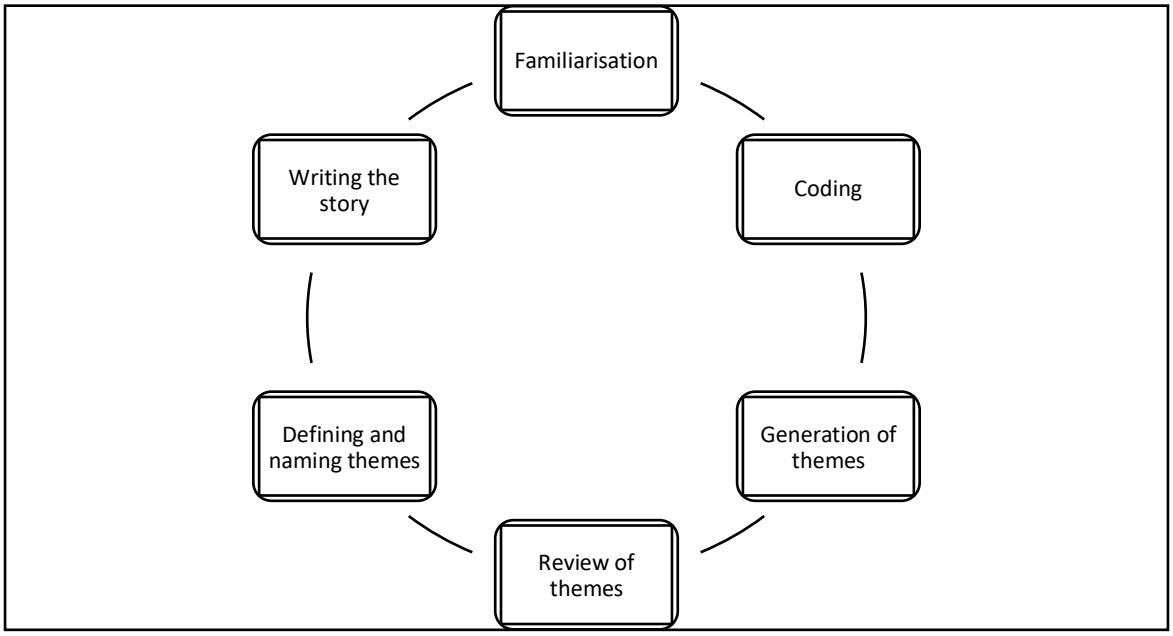
To evaluate development of professional and occupational competencies through engagement in intensive therapy with clients, the results of student participants' overall scores on the COMPASS® assessment were analysed using descriptive statistics to identify the range of values at mid-way and end-point ratings. A ceiling effect is observed in the end-point COMPASS® ratings in which all participants reached the top end of the scale, 'entry level', as expected for a final clinical experience. Therefore, the change values between mid-way and end-point overall scales ratings were calculated and compared against the average change value of their peer group.

2.4.2 Client Experiences of Intensive SLT and Student Involvement

The experiences of the client participants as retold in their interview transcripts were analysed based on the approach to reflexive thematic analysis described by Braun and Clarke (2006, 2019). This analysis involved a multi-step process as depicted in Figure 1:

Figure 1

Steps Involved in a Reflexive Thematic Analysis



1. Familiarisation: the researcher became immersed and familiar with the content of the data. This was achieved by repeated listening to interview recordings and read and re-reading interview transcripts.
2. Coding: an inductive approach was utilized to generate succinct labels (codes) that identified important features of the data potentially relevant to the research questions;
3. Generation of initial themes: codes and collated data extracts were examined to identify significant patterns of meaning (potential themes);
4. Reviewing themes: potential themes (a pattern of shared meaning, underpinned by a central concept or idea) were checked against the dataset to determine that they were a convincing representation of the data and aligned with the research question, and further refined;
5. Defining and naming themes: the scope and focus of each theme was identified, and a detailed analysis was developed. Themes were also assigned an informative name;
6. Writing up: the analytical narrative and data extracts were crafted together and contextualized in relation to existing literature.

Although listed sequentially, analysis was a recursive process with movement back and forth between phrases as illustrated in Figure 1 (Braun & Clarke, 2019). Themes were developed directly from the content of what was said by the client participants (a "bottom-up" approach) and interpreted through a critical realist lens, that is, with the understanding that participants' experiences as lived realities are produced and exist within broader social contexts (Maddill et al., 2000). Data was initially manually coded based to avoid creating distance between the researchers and the data and later transposed into NVivo 20.0 software. Codes, and later themes, were developed from the data through several cycles of reviewing and revising, frequently revisiting the raw interview transcripts to ensure the analysis

reflected what participants reported. Themes that were developed were scrutinized for robustness and duplication, and modified or discarded as appropriate. This recursive process allowed patterns of meaning related to the research questions to be captured. Illustrative excerpts from the interviews were selected to aid discussion of the themes.

2.5 Rigour and Reflexivity

Interview recordings and transcripts were checked for accuracy by an independent verifier. This involved checking all of the interview transcripts against the original audio recording and identifying any discrepancies to ensure accuracy. This verifier, an experienced SLT, also reviewed the learning contracts and 20% of clinical education activities (such as audio recordings of post-session debriefs) to ensure the student participants received equitable clinical education during their field block placement. The verifier compared the clinical education activities against the learning contracts to confirm that student participants were receiving appropriate instruction and feedback to assist them to achieve the set learning goals.

In reflexive thematic analysis, it is understood that the researcher is an active instrument in data collection and analysis, with the coding process inescapably "bearing the mark" of the researcher (Braun & Clarke 2006; 2019). Coding and the development of themes are understood to be active and reflexive processes. To aid this process, the researcher kept a reflexive journal and documented relevant reflexive and contextual information during field block placements and immediately after each client interview. The analysis of the data was also carefully reviewed and discussed between the researcher and the three supervisors to support the reflexive process.

3. Results

This chapter aims to answer the questions guiding this project;

1. What effect does intensive service provision have on the development of clinical competency and confidence and reduction of anxiety for third- and fourth-year SLT students?
2. What are clients' perceptions of intensive therapy services provided by students?

Seven (100%) of SLT student participants completed the pre-questionnaire while six (75%) of SLT student participants completed the questionnaire post-block field placement. Given the anonymous nature of the instruments (questionnaire and COMPASS®) all questionnaires were included in the final data set. Seven (100%) student participant COMPASS® data were included in the final data set. Ten (83%) of client participants completed a one-off semi-structured interview post-intensive treatment with SLT students.

The findings are discussed below. Data pertaining to the development of competency and confidence of SLT students will be reported on first, followed by reflexive thematic analysis of the perceptions shared by client participants in their semi-structured interviews.

3.1 SLT Students' Development of Confidence and Competence while Engaged in Intensive Therapy on Block Field Placements

3.1.1 Anxiety

Table 4 presents SLT student participants' self-reported anxiety levels pre- and post-placement. The SLT students self-rated their anxiety levels on a scale where 0 = not anxious and 4 = extremely anxious. As can be seen, prior to the placement beginning all students reported some degree of anxiety with a mean of 1.33 indicating a less than moderately anxious level. In the post-placement questionnaire, SLT students reported experiencing a low level of anxiety during their interactions with clients during the block field placement, with a mean level of 0.5 indicating a less than slightly anxious level.

Table 4

Pre-Post Placement Anxiety Ratings

	Pre-Placement Ratings			**Post-Clinic Ratings**		
Survey Statement	**Mean**	**SD**	**% who Felt Anxious**	**Mean**	**SD**	**% who Felt Anxious**
How anxious do you feel about interacting with clients in general in clinical practice	1.33	0.47	100.00	0.17	0.37	16.67
Please indicate how anxious you were overall during the interactions with intensive clients	N/A	N/A	N/A	0.5	0.76	33.33

* Responses were ranked on a Likert scale of 0-4, where 0 = not anxious and 4 = extremely anxious

** Ratings of 1 (slightly anxious) to 4 (extremely anxious) were grouped under the category of 'feeling anxious'

3.1.2 Confidence

Table 5

Students' Mean Pre-Post Ratings of Confidence Levels in Interacting with Clients

Survey Statements	Pre-Placement Ratings*			Post-Placement Ratings*		
"I feel confident in my ability to …"	**Mean**	**SD**	**% Who Agreed****	**Mean**	**SD**	**% Who Agreed****
Establish rapport with a client	3.83	0.37	83.33	4.83	0.37	100.00
Explain professional role to a client	3.83	0.37	83.33	4.67	0.47	100.00
Use interpersonal skills such as reflective listening and appropriate use of questions	3.67	0.47	66.67	4.67	0.47	100.00
Identify key clinical information	3.00	0.58	16.67	4.33	0.74	83.33
Interview clients about personal information	3.83	0.37	83.33	4.50	0.76	83.33
Provide information to clients	3.67	0.47	66.67	4.50	0.50	100.00
Engage clients with challenging behaviours	2.67	0.75	16.67	4.17	0.69	83.33
Interact in a professional manner	4.33	0.47	100.00	5.00	0.00	100.00

* responses were obtained on an ordinal scale of 1-5 where 1 = strongly disagree and 5 = strongly agree

** ratings of 4 (agree) and 5 (strongly agree) were grouped under the category of 'agreement'

Table 5 illustrates the pre- and post-intervention effect of SLT student participants' perceptions of confidence over time while engaged in intensive service delivery. This is represented by an increase in the mean level of confidence undertaking all eight clinical tasks in the post-

placement ratings. In the post-placement ratings, all students identified they agreed that felt confidence in their ability to establish rapport with a client, explain their professional role to a client, use interpersonal skills, provide information to clients, and interact in a professional manner.

Table 6

Post Clinic Statements Reflecting on Progress

Survey Statements	Mean	SD	Students Who Agreed (%)
My clinical skills have improved as a result of interaction with intensive clients	4.83	0.37	100.00
My skills in providing appropriate information have improved as a result of interaction with intensive clients	5.00	0.00	100.00
My confidence to interact with other clients in the future has increased as a result of my interactions with intensive clients	4.83	0.37	100.00
I learned a new skill as a result of interaction with intensive clients	4.83	0.37	100.00

Table 6 showcases that all SLT student participants perceived that interacting with clients in an intensive block field placement had helped develop their clinical skills. Content analysis of SLT student participants' open text (see Appendix 10) describes the different skills they perceived they had acquired, with most participants describing improvements in their ability

to adapt treatment (*"I learned how to adapt to different clients quickly", "identifying factors that are affecting the client… and adapting therapy based on this information", "learning how to constantly update the clients' management plan as they progress through therapy").*

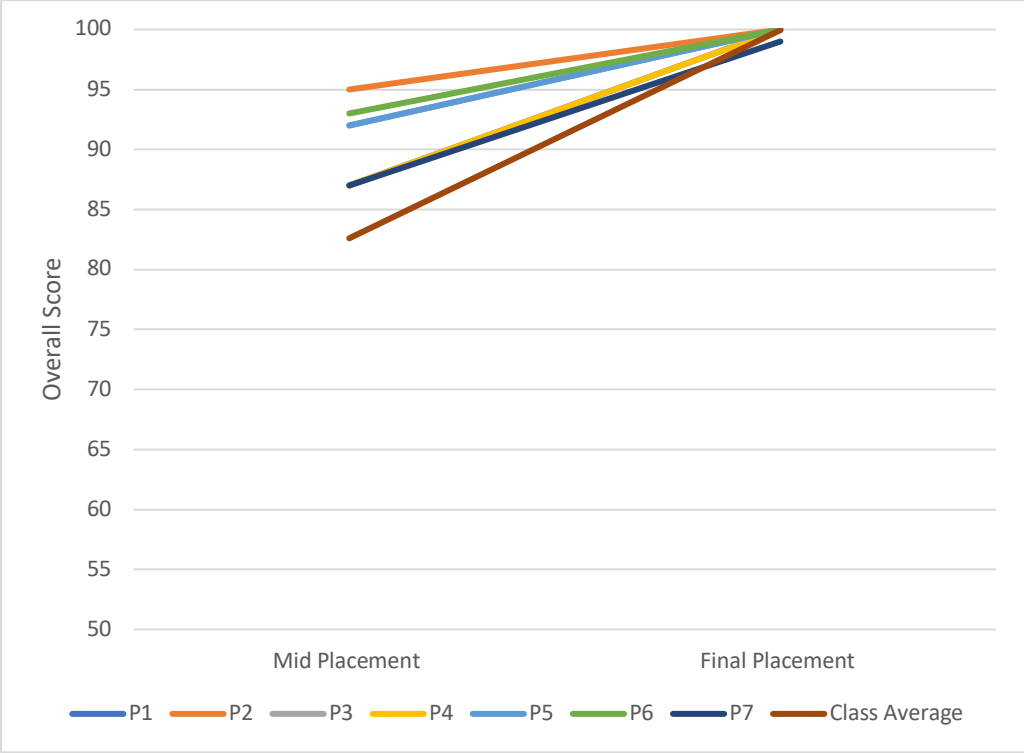
All SLT student participants responded affirmatively when asked if it would be useful to have more practice with intensive clients. The reasons participants provided for this included further practice of treatment approaches (3 participants) and that intensive treatment provides opportunities to develop stronger clinical relationships (5 participants).

3.1.3 Clinical Competence

Of the 8 students who consented to participate in the study, seven students completed the placement while the eighth withdrew for medical reasons. All seven participants who completed the placement received satisfactory results on the COMPASS® assessment used to evaluate clinical competency, which was completed at both midway and final placement assessment points. No difference was identified between the overall COMPASS® rating scores of international and domestic student participants. The results of the overall COMPASS® rating can be seen in Figure 2. As this sample of students involved final year undergraduates, a ceiling effect is observed in the end placement scores. The class average overall competency scores are also displayed in Figure 2, demonstrating a similar pattern of competency development as SLT student participants who were involved in intensive SLT service delivery. This suggests intensive treatment services are as effective as other field placements in developing the clinical competency of SLT students.

Figure 2

Change in SLT Student Participants' COMPASS® Competency Scores Over Time



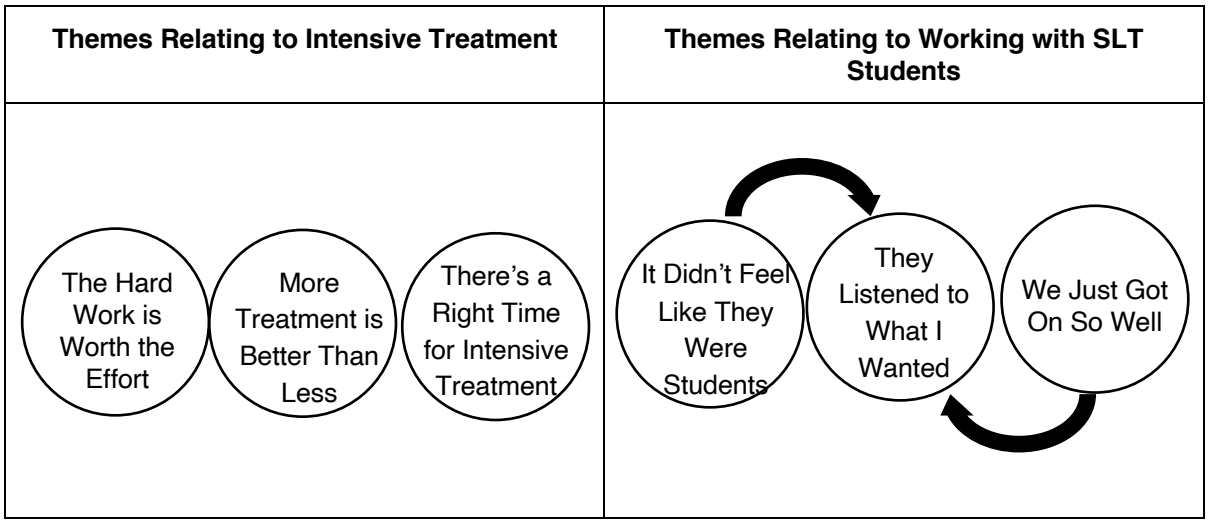
The variation of change between the participants mid- and end-COMPASS® scores ranged from 5-13 reflecting increase from the mid placement score (range 87-95) to final placement score (100). No scales were rated as having "no opportunity". The average class change score was 17.35 reflecting increase from mid placement score of 82.25 to final placement score of 100.00, demonstrating that SLT student participants in this study achieved a similar amount of change in competency scores as peers not enrolled in the study. This finding confirms that intensive treatment services provide an appropriate environment for competency development.

3.2 Client Participants' Perceptions of Intensive Treatment Provided by SLT Students

Ten client participants were interviewed to explore their perceptions of intensive therapy services provided by SLT students. Through reflexive thematic analysis, six themes were developed to provide a narrative of the data reported in semi-structured interviews (Braun & Clark, 2019). An overview of the themes is found in Figure 3. Three of themes related to experiences of intensity, while the other three related specifically to client participants' perceptions of student SLTs. Themes related to intensity of treatment identified included *The Hard Work was Worth the Effort* (theme 1), *More Treatment is Better than Less*, (theme 2), and *There's a Right Time for Intensive Treatment* (theme 3). Themes that related to working with SLT students specifically were *It Didn't Feel Like They Were Students* (theme 4), *We Just Got On So Well* (theme 5), and *They Listened to What I Wanted* (theme 6). Themes 4 (*It Didn't Feel Like They Were Students*) and 5 (*We Just Got On So Well)* describe the client participants' perceived competency of the student SLT they worked with and the positive relationship that developed between client-student over the course of intensive treatment. These two features of the treatment appeared to provide the foundation for theme 6 (*They Listened to What I Wanted),* in which client participants' reflected that they felt heard and valued by their SLT student. The three themes developed from participants' descriptions of professional behaviour are distinctly different and can be viewed as interrelated aspects of an effective therapeutic relationship.

Figure 3

Themes Developed From Client Participants' Perceptions of Intensive Treatment with SLT Students



Each theme is described in more detail in the sections below.

3.2.1 The Hard Work is Worth the Effort

In their interviews, client participants' statements conveyed their belief that SLT was an essential component of their stroke rehabilitation and portrayed themselves as goal-focussed and motivated to make the most out of the rehabilitation opportunities available even though this might be time-consuming or effortful.

This cohort of client participants appeared to reflect a self-selected group of individuals with particular interest in improving communication and swallowing, who possessed the underlying attitude that SLT input post-stroke is beneficial. "Gavin" displayed his motivation and willingness to work on his communication through any available options;

> "They [the SLT students] were going {laughs}… they were there!... I think "great, more" {laughs}… If you do another group, I'll do it Saturday. Or um Friday… {laughs} I'll do it!" (Gavin)

This desire to access available rehabilitation options was shared by another participant who, when discussing hypothetically accessing more intensive treatment commented "I'd take it, oh yes {laughs}… Trust me, I would" (Kim).

Client participants did not appear to want only general support from intensive therapy; comments reflected not only motivation to engage in rehabilitation in general but specific aspects of recovery that were particularly important to the participants. Many of the client participants expressed the goals of their intensive treatment provided by SLT students overtly. One such participant, given the pseudonym "Kenneth", referred to his main rehabilitation goal of improving his dysphagia frequently throughout his interview; "And I had a goal. My goal was bacon and eggs." Other goals reported by client participants included being able to use emojis in text messages, (Chris) reading aloud from the Bible in a study group (Talia), being able to give instructions at a social carpentry workshop (Gavin), and being understood by unfamiliar listeners (Maureen). These comments suggest that the client participants were actively involved in the development of therapy goals to guide the intensive treatment and were supported to identify therapy goals that were meaningful to them.

Intensive SLT treatment was perceived to promote achievement of these goals. Client participants reflected on positive changes to swallowing and/or communication abilities at impairment and functional levels and attributed these gains directly to the intensive SLT they had completed;

> "My speech is so much better… from saying only 'fuck' and 'sorry', I'm really happy {laughs}" (Kim)

> "Well no, you know, I'm much better than I was when you come from hospital" (William)

The perceived usefulness of intensive therapy was also demonstrated in Maureen, Talia, Kim and William's reports of having kept the therapy resources to refer to after the completion of the treatment.

All the client participants described their experience receiving intensive treatment with SLT students as positive and all reported noticing progress towards goals and improvements in swallowing/communication impairments. However, the client participants also acknowledged that intensive treatment had its challenges. They described that completing intensive treatment required effort. Scheduling intensive treatment sessions required time management skills to prioritize/schedule rests to manage fatigue, other therapies and participation in therapy or support groups while maintaining hobbies and social connections ("Busy, yes" (Chris)). Although client participants reported having busy schedules, they denied feeling overwhelmed by intensive treatment.

Some of the client participants reflected that they had full schedules prior to their strokes and that re-filling their schedules with rehabilitation-related tasks was not onerous. For example, Kim compared her experience with intensive SLT while simultaneously receiving occupational therapy, physiotherapy and daily key support work visits with the working life she led right up to the time of the stroke "No, no, cos I used to be so busy in my two jobs, so {shrugs}". She further explained that she had asked her family and friends to change their visiting habits to protect available therapy times and rest times during the period she received intensive treatment; "I told them not to come during the day. I said "I'm, this is important for me," so they all, my friends and families, didn't come in the daytime." Other participants also described being able to arrange their commitments to enable them to continue their usual activities while receiving intensive SLT; "We didn't have to shelve anything (Nikau: yeah) or put anything aside (Nikau: nah), it was easy (Nikau: yeah)" (Nikau's wife); "No, not really… because, I'd do, uh, other different things, uh before [SLT session], and then we'd do that" (Gavin).

In addition to logistical scheduling considerations, management of fatigue and cognitive effort were also raised as issues to overcome. Fatigue was a particular barrier to full engagement in intensive SLT for Rosalie, whose husband explained "fatigue is an arse" and "even if you had three bookings a week, you might only use one, so you just gotta go with it, it's quite tough". Possibly compounding the effects on fatigue were the cognitive demands of treatment, which client participants acknowledged to be effortful at times as demonstrated in these quotes "oh {pointing at a topic card; reading aloud] hard work" (Chris) and "I think it's hard" (Colette).

All client participants interviewed reported that despite the demands of intensive SLT and the need to manage their schedules to accommodate for the number of sessions and any required rests, they would also increase the frequency of the weekly language therapy sessions due to the perceived value. “I would have liked her to come more… Well, I found her bringing the sheets for me to read… found them very good” (Maureen); and “I could have stayed another week, uh, day, ‘cos I felt she was very, very good” (William). The benefits of intensive SLT appeared to outweigh the challenges as illustrated by Nikau and his wife in this exchange:

> Nikau’s wife: well yeah ‘cos I can see that, because it’s, because [Nikau] um, you know, the rewards of speech language therapy are very tangible for Nikau. He is prepared, you know, he is prepared to… he would put things aside, he would fo-, if the opportunity was there, he would focus on it.
>
> Interviewer: Yeah?
>
> Nikau’s wife: and dedicate to it.
>
> Nikau: well, I got a stake, a stroke!
>
> Nikau’s wife: Well, that’s right, ‘I’ve got aphasia, what else am I gonna do?’
>
> Nikau: and I can’t talk very good!

The perceived value of intensive SLT with students was also evident in reports of disappointment that the treatment had come to an end (“I really missed, miss her coming

here" – Talia; "Should've been longer" – Nikau), and vocalizations of desire for it to continue for longer and in many cases indefinitely ("I would have gone on forever" – William).

The overwhelmingly positive reports from client participants developed a narrative that intensive therapy provided by SLT students was highly valued, and therefore was viewed to be a worthy investment of client participants' time and effort.

3.2.2 More Treatment is Better than Less

Client participants perceived the intensive therapy provided by SLT students to be more effective than other types of therapy they had received in the past. Past therapy comprised mostly of weekly sessions provided by the SLT with supplementary exercises to complete between sessions. "I think myself it would be better for, better more, preferred to less" (Gavin).

> "For me, it was really good, 'cos um, I had to work on it [communication]. And the… when I was doing it by myself, if I say things that I know what were wrong, and the girls were here to say 'no', X, in my head I can say it, hear it wrong, and they was good for me help do things like that, yeah. Yeah… 'cos I couldn't. I know I was saying it wrong, but I didn't have any to help me, so" (Kim)

In the extract above, Kim commented on how although she was able to self-monitor her performance she was unable to complete the prescribed treatment exercises independently as she was reliant on cues and prompts for correction. This is interpreted as showing that Kim

viewed intensive treatment with the student SLTs more favourably than the previous service she received (once weekly SLT session with home practice exercises to complete). Kim's preference for intensive treatment was echoed by other client participants, including Nikau who commented *"*it's dumb*"* in regards to weekly treatment, and Talia who opined "I need someone to talk with, all the time."

Many of the client participants who had experienced weekly treatment and intensive treatment reported that they felt they had made more progress during the intensive treatment provided by students ("You would get better each week" – Colette's husband) and explained that it felt like the time in sessions and between sessions was used more effectively.

> "So, we noticed that, um, it was easier for Nikau to engage at each sess, session, rather than having, um, you know, that sort of lengthy introduction period before you get going. So, so it's easy to, to kick off from where you left off, in a way." (Nikau's wife)

Nikau and his wife were particularly strong in their views that intensive treatment had worked better for them ("One or two? No, no good" – Nikau). They noted that intensive SLT treatment encouraged them to focus more on speech language therapy than had been the case in their experiences of weekly treatment ("It brought it to the forefront for the length of time that we had that, which was great… It was like, part of that, that time. It was a very prominent <Nikau: Yeah> part of what was going on" – Nikau's wife) and felt that Nikau had made more progress in intensive treatment although this was provided over a shorter period of time, than in non-intensive treatment which he had received for longer ("but

something happened in those intensive situations, where, from the intensive therapy, where I could tell that Nikau was throughout the day thinking about what he'd learned, and what was going on, what he'd experienced"). Nikau's wife also reported that she found it easier to support him with practice and exercises while receiving intensive treatment, commenting;

> "One of the things that I really, um, benefitted, well, uh, that I got out of it was that it made it easier for me to support Nikau with his therapy in the gaps in between. So for a week, it's a really long time to sort of be a mock speech language therapist and help, but when it's like that, it was so much easier. So for our conversations and what, you know, how we were communicating in that time, was building on what happened in the session." (Nikau's wife)

Similarly, when asked what they might wish to change about the intensive therapy provided by SLT students, 9 of the 10 client participants responded they would like access to more intensive therapy. Most respondents stated their preference for an increase in both frequency of weekly sessions to 5-6 sessions per week and in duration of intensive SLT to 12-an indefinite number of weeks.

3.2.3 There's a "Right Time" for Intensive Treatment Post-Stroke

Throughout the interviews it became apparent that ongoing negotiation and adaptation of therapy intensity is important to client participants. As Nikau commented, "It's not you, it's us!" demonstrating that the clients' needs and preferences should be at the fore-front of clinical decision-making. At the initiation of the therapy programme, client participants and their clinician decided upon an average of 3.5 sessions a week (range 3-6) however upon

reviewing their service, most client participants felt that they would have tolerated (and preferred) an increase in therapy intensity. The preferred number of sessions per week varied across participants, with some identifying four a week would be their maximum while others interested in trialling five or six sessions a week.

One of the client participants who did not feel an increase in the number of therapy sessions per week would be of benefit to her was Rosalie. Rosalie had transitioned from subacute inpatient care to her home at the commencement of intensive rehabilitation and was dealing with adjustment to home and management of significant post-stroke fatigue at this time.

Of the clients participating in this study, five were seen immediately post their discharge from acute or subacute hospital (Maureen, Kim, William, Kenneth, and Rosalie) while others were over a year post their stroke (Gavin, Talia, Colette, Nikau, and Chris). Client participants described their transition back home after their hospital stays as positive times. Kenneth reflected "and um, when I come home or released from hospital, it was so bloody good. I just sat on the couch, didn't even have the TV going, and just ah shit, this is good". Rosalie and her husband also discussed their views of the importance of returning home:

> Rosalie's husband: There's no substitute for home.
>
> Rosalie: Yep.
>
> Rosalie's husband: Just for you whole mental, isn't it?
>
> Rosalie: Yep {smiles}
>
> Rosalie's husband: Your own bed.

Rosalie: {nods} X.

Rosalie's husband: Your animals around you.

Rosalie: Ooh yes {smiles} X! {points out the window at the horses}

[and later]

Rosalie's husband: You don't have those good things in life around you, you know? You can just see by the smile on her face that it's dynamite.

For most patients, adjustment back home and management of weekly schedules that typically involved multiple health professionals and visits from personal carers or support workers was reportedly manageable alongside intensive speech language therapy. However for Rosalie, management of post-stroke fatigue had to take priority.

"We have to have that break from one 'til four so Rosalie can have a sleep… If we can't do that, just, you know...And we have tried, we have tried to break that cycle but {shaking head} it doesn't. <Rosalie: "Mm"> You just gotta roll with what it is." (Rosalie's husband)

This experience sounded comparable to that of Colette, who also experienced significant post-stroke fatigue that persisted after her return home and affected her ability to engage in rehabilitation sessions (*"* It was very short, you know. I mean, it was like 15 minutes, something like that, and that was enough then" - Colette's husband) and also to that of Nikau, who described a period of "sickness" characterized by fatigue and confusion following his discharge.

Nikau: Before, before I was sick. I was.

Nikau's wife: Yeah.

Nikau: Yeah.

Nikau's wife: Yeah, so Nikau, Nikau's been able to clearly identify the time period

<Interviewer: Mhm>

<Nikau: Yep>

Nikau's wife: when he was still what he calls 'sick' from the stroke

<Nikau: Yep>

<Interviewer: Mhm>

Nikau's wife: And, you know, coming out of the mist I. suppose it was

<Nikau: Yep>

Nikau's wife: like for him, yeah, coming

Interviewer: Mm.

Nikau's wife: dealing with the

Nikau: Yep

Nikau's wife: confusion and all that sorta, and the fa-, early stage

When asked about when in their stroke journey they would have liked to access intensive treatment, Colette and Nikau felt that around the time of return home would not have been the appropriate time for them. When reflecting on whether intensive treatment would have been appropriate to commence immediately post-discharge from hospital, Colette commented

"um, it would be too hard." Nikau's wife was in agreement ("I think, I think you would have found it quite hard") as was Nikau himself ("I concur"). Nikau elaborated that post-stroke adjustment was difficult, and he felt he required time to adapt to the social and emotional changes before intensive treatment would have been appropriate.

> Nikau's wife: Too much. "cos there's a lot of, when you've got aphasia, there's a lot of things you need to adjust to
>
> Nikau: Yeah, it is
>
> Nikau's wife: Yep, and you know, there's the whole social aspect
>
> Nikau: Yep
>
> Nikau's wife: Of, of, of you know, we identify people by what, how they speak
>
> Nikau: Yep
>
> Nikau's wife: And what they say so much, and that was a big part of your identity
>
> Nikau: Yeah, well that's right
>
> Nikau's wife: Yep a big part, so it was quite, it can be quite challenging. The whole social aspect, the family aspect
>
> Nikau: Yep
>
> Interviewer: Mm
>
> Nikau's wife: People not really understanding stroke
>
> Nikau: Yep
>
> Nikau's wife: work changes, every…
>
> Nikau: Yep

Nikau's wife: It was a big, whole lot for you to deal with

Nikau: And when I had, when I had stroke, I was… it was.. biggest, just X

Nikau's wife: It blew your whole would apart, didn't it?

Nikau: Yep, yep

Nikau's wife: Blew everything… everything changed for you,

Nikau: Yep

William also reported a period of adjustment when he returned home ("I was a bit un, a bit unsettled, yes" - William), although he reported this did not affect his ability to engage in intensive rehabilitation at the time.

While Rosalie's experience was not shared by the other client participants receiving intensive treatment immediately following to their transition out of hospital to home or rest home in this sample, for some individuals with a stroke, intensive treatment would be more appropriate after that period of settling into a routine or after fatigue symptoms had lifted. Colette and Nikau both reported the time period they would have begun to be able to engage in intensive rehabilitation successfully to be approximately one year following their stroke. Both of these clients felt that they would have been able to identify when they were 'ready' for intensive treatment. "But you're at a stage now where, in your aphasia journey, where you could identify what you wanted to do, whereas perhaps before you wouldn't have been able to" was a comment made by Nikau's wife, with agreement from Nikau ("Yeah, that's right. Yeah.").

Client participants described that they mostly found intensive treatment manageable and would have liked to extend both the length of sessions (in terms of minutes per sessions), frequency of sessions (in terms of number of sessions per week) and duration of intensive treatment. There was no clear consensus about preferred levels of treatment intensity or preferred timing of intensive treatment within the stroke rehabilitation journey.

3.2.4 It Didn't Feel Like They Were Students

Client participants unanimously described SLT student involvement positive and expressed their perception of their student as competent; "It was fabulous <Nikau: Yep> , it was really good" (Nikau's wife), "I felt she was very, very good" (William), "She was awesome" (Rosalie's husband). At times it was difficult for client participants to identify why they perceived the student as so capable. Client participants attributed the progress they made with their communication and swallowing impairments directly to the work they completed with their student SLTs. Kenneth directly linked the input from the SLT student to the progress he made in this extract;

> "I just said, um, they said it was good you've done that in 'x' amount of time blah blah blah, and I said, well yeah thanks to [student]. I did all the exercises that she suggested and uh, thanks to [student], yeah." (Kenneth)

Client participants and their support people reported that perceiving that the quality of input they received was comparable to what they would expect from a qualified clinician:

> "And really, you can't tell the difference [between final year students and graduated clinicians]. They're professional, they're organised, they keep the pace of the therapy going. They, they've planned how the session will go, they plan how the next one will go. It's really, really quite good." (Nikau's wife)

Client participants also responded positively to perceptions of organization and planning, noticing that students could direct the pace and direction of treatment sessions effectively. This included balancing the amount of conversation with therapy tasks ("[student] was really good at drawing me back if I get on the too much cheating, checking, chaking [chatting]" – Kim), ensuring therapy exercises were completed correctly ("Regimental <I: regimental?> [wagging finger]" – Kenneth), and being able to increase or decrease task difficulty to match performance.

> "What I thought, what I thought was good, though, is, is if they, if they sat down with you, and you, and you, like, whatever exercise it was, if they sat down with you and that exercise and you're going bang, bang, bang {snaps fingers on each "bang"} and just getting them all right, they, they, they just went on to something a little more difficult." (Colette's husband)

Perception of competency was also reflected through the way clients described SLT students to be knowledgeable in the areas they were practicing in. Nikau identified that he valued his SLT student having knowledge about the specific conditions he was affected by ("and, you know, if they know about stroke, it's good… and aphasia." – Nikau). When Kenneth explained "She knew what she was talking about. I didn't. So I listened to her," he may have been reflecting on the SLT student's ability to convey a convincing rationale for the

compensatory strategies or rehabilitation exercises that were being promoted. His comment also showed a level of trust in the student and of valuing her recommendations. This was particularly striking in Kenneth's interview as he described in other sections of the discussion reduced engagement with the recommendations of qualified health professionals, specifically a doctor and registered nurse in acute care, and in these comments displayed a lack of insight into the reasoning behind the health professionals' requests. Several client participants commented on their perception of the SLT student as an expert ("They always, you know, you never felt like they didn't know what they were saying" – Colette's husband) which appeared to contribute to the favourable view of the student ("She was awesome, and she knew her stuff" – Rosalie's husband).

In contrast to explicitly demonstrated SLT student knowledge and skill, client participants also used their interpretations of non-verbal indicators of confidence to inform their perceptions of SLT student competence. Client participants reported perceiving the students they worked with to be confident and comfortable in their role in speech language therapy sessions ("they were very smooth and confident about how they do it" – Colette's husband). Appearing confident appeared to in turn make client participants have confidence in the SLT students. In the extract below, Rosalie and her husband reflected on how their SLT student appeared to feel confident in their interactions together. Rosalie's husband appeared to have interpreted the presentation of confidence as reflecting underlying knowledge, skill or experience.

> Rosalie's husband: you know, I think when you're working with somebody else, you have to have a certain amount of confidence.
>
> Rosalie: Oh, yes. X. {smiling, pats husband's shoulder}

Rosalie's husband: And that confidence comes from actually knowing your job.

All client participants reported being aware that the SLT student they were working with was in their final year of study ahead of entering the workforce. While many client participants described feeling that student year level did not have a bearing on the competency of the student they worked with, there were a few who acknowledged that they may not have felt as confident working with less-experienced SLT students. Few of the client participants had prior interaction with less-experienced SLT students. One client who had interacted with SLT students in their first professional year of study reported that he had not felt his interactions with the less-experienced SLT students had helped his aphasia, and described this experience as being uncomfortable ("This {writes "guinea pig" on the page}" – Nikau}.

When reflecting on their experiences with intensive speech language therapy provided by SLT students, all of the client participants interviewed reported they would recommend the experience to other people in similar situations and would be personally open to working again with SLT students in the future ("Oh absolutely" – William). This willingness was often directly linked to the positive view of the SLT student, such as Maureen who commented "yes, if they're as good as she [SLT student] was" and Rosalie and her husband ("I think with the experience that we've had, yes definitely.")

From the discussions in the semi-structured interviews, a strong view of the client participants' perspectives of the SLT students as competent was developed.

3.2.5 We Just Got on So Well

In addition to perceiving the SLT students to be competent at providing intensive treatment, client participants described establishing genuine connections and effective therapeutic relationships with the SLT student involved. (Rosalie's husband: "And you two got on really well", Rosalie: "Yes, oh yes! {smiling}").

When reflecting on their stroke rehabilitation journey, client participants identified that having a positive relationship with their health professionals was important to them. SLT students were perceived to be a coach and source of encouragement ("they're always Pollyanna" – Kim) and client participants appeared to react positively towards behaviours of the SLT student that signified enthusiasm or investment in rehabilitation, as conveyed by William: "they're active into what was happening". An example of this was provided in the interview with Kenneth, who spoke of how he viewed the SLT student's attendance at another appointment as a benefit; "And it was good to have her there, as back up. And it was good."

One client participant, Talia, spoke very fondly of the SLT students that had been involved in her treatment. She spoke of feeling supported to participate in conversation and achieving conversation success with SLT students on a background of conversation breakdown with familiar conversation partners, such as family members, who were naïve to conversational supports for aphasia. "I like them [the SLT students] talking with me [pause] because uh, my children doesn't like talking with me because, uh, my mind was, uh, so stressed". The client participants described the SLT students as being skilful in the use of strategies to promote participation in conversation, such as given extra time to formulate responses (" Um, yes, uh.

I think they would be… patient" – Colette) and specific techniques to overcome the impact of word retrieval difficulties ("[student] used to help me with the words I said" – Talia).

The client participants also described the SLT students' as using interpersonal communication skills to help build a relationship. Maureen stated "the way she spoke to you, you know, she was very good" which was inferred to mean that Maureen felt the SLT student had spoken to her in a respectful manner. Gavin also commented on communication style SLT students utilized, reporting "I think they were very good. They were nice and pilot [polite]." In one interview, the combination of conversation support strategies and interpersonal communication style was recognized simultaneously, with Rosalie's husband commenting "the way she handled Rosalie and always spoke clearly with respect and, you know. 'cos there's nothing wrong with your ears" to which Rosalie responded by shaking her head and laughing "no". This reference to "the way she handled Rosalie" and "spoke clearly" shows that the SLT student was using strategies to support Rosalie's participation in conversation in a way that was well received by both the client participant and her husband.

Establishment of effective communication strategies enabled the client participant and SLT student to engage in conversation that enriched the therapeutic relationship. Mutual sharing of experiences was identified as an action that developed the relationship further. Client participants described enjoying sharing information about their lives and having the SLT students reciprocate ("I liked them talking about themselves" – Talia). Client participants described particularly appreciating when a shared interest or experience came up in conversation and could often recall the details of this conversations after some time had

passed, being able to recall the details in the semi-structured interviews. The ability to recall these conversations suggests that they made a meaningful impact on the client participants.

> "I thought she was quite good. She was very good, I mean, yeah. 'cos um, about a couple of weeks she came, I don't know why it came up, it came up [pause] about [pause]about a motorcycle I had when I was a young, much younger, for years… and they brought up, well, her father was involved and this sort of motorbike so I had that motorbike and yes, I know how to understand that, and she was a, [student] was able to say [pause] she was able to [pause] she was able to, her father was had that sort of similar car, uh, bike." –(William)

In the quote above, William elaborates on his perception of the SLT student as "good" by illustrating how they found points of similarity which involved both the client participant and the SLT student sharing some personal information about themselves. Kim reflected on how she felt she could tell which health professionals were genuinely invested in her recovery, stating "it's the little things" and further describing that she felt an authentic connection with the SLT students "'cos I know them. I always say "how's your evening like" and "what you've been doing in the weekend?" and so, yeah."

Nikau and his wife identified that developing a sense of who the SLT student was through conversation was important for him from a cultural perspective. "Talking is bloody good" reported Nikau, and his wife further explained:

> "Just sitting and having a chat, and, um, you know, getting to know people is really, really important for making <Nikau: "yeah, it is"> I mean, that's so important for

> Nikau as a Māori <Nikau: "Yep"> because that's the way Māori do things. <Nikau: "Yeah."> It's important for you as a Māori <Nikau: "Yep"> but it's also important as a bedrock for what's going to happen next." (Nikau's wife)

Client participants from Māori and Pasifika backgrounds described physical contact as being important to them. Nikau and Talia commented on the place that appropriate physical contact had in building an authentic connection with the SLT students they worked with ("Like that {touches interviewer's shoulder} You can do that, can't you? You should." – Nikau). Physical contact was described as a way of demonstrating an authentic relationship ("Well, because when she came, she laughed, we hug each other." - Talia). The absence of physical contact was identified to be a sign of a less beneficial relationship. When Nikau reflected on experiences in which he felt less connected to the provider of the therapy, he commented on a lack of ease around physical contact: "You can't, you can't do like {touches interviewer's shoulder, kisses air beside cheek} you can't. They, um, they go all {mimes rigid, scared posture}." None of the NZ European participants commented on physical contact.

In addition to effective use of communication strategies, respectful behaviour, appropriate physical contact, and mutual sharing of some personal information, client participants identified humour as something that built a relationship. Kenneth recounted that being able to joke with his nurses during his stay in a subacute rehabilitation hospital was an important part of establishing a genuine connection: "Well, that broke the ice, that broke the ice. And we took the piss out of each other big time."

Client participants acknowledged that the amount of contact they had with their SLT students courtesy of an intensive treatment model may have contributed to the development of this valued authentic relationship. When reflecting on those previous experiences in which Nikau felt a successful therapeutic relationship was not achieved, Nikau's wife commented that this was in the context of weekly visits over a short time period, and went on to hypothesize;

> "but longer, and more intensive, could probably resolve all those issues. As you get to know people… It [the previous experience] very uncomfortable in the beginning but it got better, towards the end. And it could have got even better if it had gone on longer." (Nikau's wife)

Kenneth also identified that time spent with the SLT student, who was a consistent visitor, helped the development of the relationship, stating "and that was so good because you weren't seeing a different once each time. And she got to know me, and we respected each other. And it was, it was good." He compared the experience of receiving intensive treatment from the SLT student against other experiences in which the person providing the treatment had changed regularly and an effective relationship had not been established, commenting "once again, the same person was so good".

All of the client participants interviewed reported having built a successful connection with the SLT student involved in the intensive therapy that appeared to give them benefits beyond the opportunities to practice therapy activities. At times, Talia became emotional in her interview and expressed her sadness that the SLT student, having completed the block field placement, was no longer able to visit, stating "I, I really missed, miss her coming here".

From a client participant perspective, time spent developing the connection between the client and the SLT student was valuable, and client participants described valuing getting to know the SLT students on a personal level.

3.2.6 They Listened to What I Wanted

Client participants reported they viewed the SLT student they had worked with fondly. Client participants attributed the authentic relationship they had developed as a significant contributor to the perception of the treatment experience being successful. However, a friendly relationship alone was not enough to make the experience of receiving treatment from a student a positive one. This was in evidence in discussion with Nikau and his wife, who highly valued the intensive treatment provided by an SLT student in this project but described having previous experiences with students that were not valued. Nikau's wife commented "so, first year students, no good. They were no good. I mean, they were lovely people and it was nice to be part of their journey". This statement shows an acknowledgement that a lack of competence could not be made up for by a pleasant demeanour. Conversely, Kenneth described experiences with qualified doctors and registered nurses which he did not value, suggesting that competency or qualification did not guarantee successful intervention either.

When describing the positives that they experienced from receiving intensive treatment from SLT students, client participants described feeling heard and valued. Students were perceived to be attentive listeners who acted upon requests or concerns that the client participants may raise ("because they listened to me, and helped me, so." – Kim). This included the process to develop management plans and treatment activities. SLT students were supported by their

field supervisor to work collaboratively with their clients to identify treatment goals and targets. Client participants described positive responses to being involved in the development of their management plans as reflected in comments such as Chris's response "{points to 'lightbulb' picture card and 'bulls-eye' picture card}" which in follow-up conversation was verified to mean that Chris viewed the treatment provided by SLT students to be targeting the goals and impairments that he wished to work on and also including novel or interesting approaches to do so. Gavin made similar comments in his interview, noting "yes, and doing what I dear… yes what to do {what I wanted them to}".

The client participants also reflected on receiving treatment materials that had been personalized to use targets relevant to them, such as family names as stimuli in motor speech drills, incorporating an interest in current events into reading therapy tasks, or interest in woodwork into procedural discourse tasks ("and, um, they changed to get my people I like, in my life, I use" – Kim).

When discussing his stroke journey, Kenneth reported a reluctance to listen to health advice of the health professionals he worked with in acute care, describing encounters with doctors and nurses where he distrusted the advice or purpose of an examination:

> "One of the doctors, and there's three or four doctors, I don't know, did finger-nose {demonstrates touching finger then nose with other hand} like this and he said 'go faster' and I said 'the last stroke you buggers told me to slow down. I'm not going faster, I'm going my pace, alright?" (Kenneth)

In contrast, he reported high levels of confidence in the student speech language therapist he worked with and followed her recommendations closely ("I just tried to do what they said

to”). Kenneth demonstrated in his interview that he highly valued repeated contact with his care team and the development of effective relationships in which he felt known, seen, and heard. The perception of being heard and valued contributed to his confidence in following the advice of a student, who was less qualified and experienced than the specialist team he interacted with in hospital.

Another client participant also described the experience receiving intensive treatment from an SLT student as superior to interactions with a more qualified clinician due to not feeling heard or listened to in the latter’s intervention. Colette and her husband identified a contrast in the type of speech language therapy they had received when the goals of the client and the therapist differed.

> “And the difference! Because, like, when [previous SLT] did it, well, you know, I mean {coughs} she was, she was good, but her, her way was completely different from [the student’s] way because her way was always centered on, um, like pictures, you know, like a picture book… And she was saying to Colette ‘well, you know, if you can’t think of it, you go through, you go through the book,’ you know, but that’s, that’s not really what you wanted to do. I mean, you wanted to, you wanted to learn the words, you know, vo-vocalise. You know? So, it’s no good.” (Colette’s husband)

Students were noted to have listened to the client participants to identify what goals the clients had for the therapy input and how to work on these collaboratively. This led to the development of personalized treatment programmes. SLT students were reported to invite client participants to identify any changing goals or priorities as the treatment progress and

made changes to the management plan accordingly. This was something that client participants felt their SLT students were particularly good at.

> "She was really good at picking up on what it was that Nikau wanted <Nikau: "Yep"> and developing a programme <Nikau: "That's right"> that just, hit the mark perfectly. <Nikau: "That was great".> All of the resources and everything else, she, like, the next day she came and it was all exactly what you wanted." (Nikau's wife)

> "That's right, I asked, I said "Oh that, I'd like to do that"… And she did it." (Nikau)

The client participants' experiences of feeling heard appear to require a combination of some clinical competence from the SLT student involved and the development of a successful therapeutic relationship. These three perceptions (of competence, genuine relationship, and being heard) are mutually reinforcing and resulted in the overall view of the SLT student as an effective and valued member of the client participants' care team.

3.3 Summary

In summary, this chapter has provided evidence that supports the hypothesis that SLT students engaged in intensive therapy provision during block field placement develop their clinical competency similarly to peers providing less intensive services. This chapter has also provided evidence that clients have favourable perceptions of intensive therapy services provided by students.

4. Discussion

This study aimed to examine students' competency development when engaged in intensive SLT provision during block field placements and to explore clients' experiences of receiving intensive SLT provided by SLT students. It was hypothesized that students would develop their clinical competency similarly to peers providing less intensive services, and that clients would have favourable perceptions of intensive therapy services provided by students.

4.1 The Effect of Intensive Treatment on Development of SLT Students' Competency and Confidence

The first research question was 'what effect does intensive service provision have on the development of clinical competency and confidence and reduction of anxiety for third- and fourth-year SLT students?'

The findings demonstrate that students who deliver intensive treatment to clients while on block field placement develop their clinical skills at expected rates comparable to that of their peers. All of the SLT students who remained in the study reached the levels of clinical and professional competency required to graduate from the degree programme and enter the workforce. There was no difference in final level of competency between international and domestic student participants. Additionally, engagement in intensive service provision also supported SLT students to develop self-confidence in their clinical abilities.

Prior to the placement beginning, all SLT student participants reported some degree of anxiety about interacting with clients. The average level of pre-placement anxiety was rated to be a less than moderately anxious level. Pre-placement anxiety is common in SLT

students. The questionnaire used in this study was developed from the questionnaire used by Hill et al. (2013). Undergraduate SLT students within that study self-reported a moderate-to-very anxious level of anxiety prior to beginning a simulated placement (Hill et al. 2013). The lower level of anxiety self-reported by participants of this study is not unexpected, as these students were in the fourth year of study while Hill et al. (2013) enrolled student participants from the first year of study.

At the completion of the placement, the student participants self-reported experiencing a low level of anxiety during their interactions with clients during the course of the block field placement, with the mean rating indicating a less than slightly anxious level. The reduction in self-reported levels of anxiety may reflect the development of clinical competence and confidence in SLT student participants. Additionally, all student participants self-reported an increase in confidence levels on the post-questionnaire, perceiving that interactions with intensive clients while on block field placement had developed their clinical skills. Furthermore, ratings of clinical competency showed that SLT students on block field placement in an intensive therapy environment developed their competency in a similar way to their peers.

Engagement in intensive treatment on block field placements offers possible advantages and disadvantages when compared with placements within less intensive services or experiences in weekly field or campus-based placements. One such possible disadvantage is the exposure to a more limited number of clients. Due to the nature of intensive treatment provision, although the time spent in direct and indirect clinical activities is expected to be comparable between types of service, the total number of clients encountered by a student within an

intensive service is likely to be smaller on average than the number encountered by peers placed within a less intensive service. For example, student participants within this study could expect to provide approximately 12-15 hours of treatment per week across 3-4 clients. Contrastively, students within a community service providing a lesser intensity may provide 12-15 hours of treatment per week across 12 clients. Exposure to a smaller number of clients could restrict some clinical opportunities (Jones et al., 2015), however none of the SLT student participants were rated as having "no opportunity" to demonstrate a skill on the COMPASS® assessment. This infers that despite probable exposure to fewer clients, involvement in intensive treatment on block field placements continued to offer a wealth and variety of opportunities to develop clinical skills.

This natural restriction to the number of different clients encountered is worthy of consideration. Jones et al. (2015) previously found that a lack of exposure to a diverse range of clinical experiences had a negative impact on occupational therapy and SLT students' self-perceptions of clinical ability. The variety of clinical experiences was also found to contribute positively to physiotherapy students' perceptions of the value of clinical education opportunities (Rindflesh et al., 2013). The majority of SLT student participants in this study self-reported high levels of confidence in their clinical abilities at the end of the block field placement. However, one SLT student participant identified some ongoing low-confidence in the areas of identifying key clinical information, interviewing clients about personal information, and engaging with clients with challenging behaviours. Although this participant self-reported less confidence, they were a member of a cohort of SLT students who all achieved "Entry-Level" competency on final assessment. This indicates that the field supervisor felt this less-confident student had the ability to perform such tasks adequately in the future.

A disparity between level of clinical competency and clinical self-efficacy, conceptualised as the confidence in one's own ability to complete clinical tasks successfully, has previously been identified in newly graduated SLT students (Pasupathy & Bogschutz, 2013). Pasupathy and Bogschutz (2013) identified that new graduates had achieved entry-level skills across seven domains (which included case history, diagnosis, administration and reporting, communication, collaboration and counselling, and intervention) but were not equally confident about performing these various tasks. Similarly, the less-confident SLT student (now new graduate) in this study also identified varying levels of confidence across tasks despite reaching entry-level competency ratings across them all. Although Pasupathy and Bogschutz's (2013) findings suggest disparities in confidence and clinical self-efficacy are common within newly graduated SLT students, a perceived lack of variety compared to peers could create a greater risk of students experiencing low clinical self-efficacy at the completion of the block field placement. Students might lack the insight or confidence that skills developed through working intensively are transferable to other clients, different diagnoses, and different therapy approaches. Interviews with medical students in their final year of a 6-year undergraduate course identified that these students perceived their knowledge and skills to have limited transferability between patients and clinical settings (Pinnoc et al., 2019). A recent study by Wolford et al. (2020) found that SLT new graduate clinicians identified needing similar level of support from their supervisors as less experienced SLT students, suggesting that the expectation of clinical independence or high levels of clinical self-efficacy in new graduates may not realistic.

Bandura (1997) explained that self-doubt and low-confidence can easily undermine a knowledge and skill-base, resulting in a disparity between potential and actual competence.

Investigations of self-efficacy have found that confidence can be developed using clinical education strategies of peer learning, guided practice, and graduated practice in combination with reflective processes (Bandura, 1997; Lee & Schmaman, 1987; Rudolf et al., 1988; Pasupathy & Bogschutz, 2013). When supporting students through block field placements that have a focus on intensive treatment provision, specific focus on transferability of skills and development of clinical self-efficacy should be considered to offset the possible effects of perceived lack of variety or exposure. Such a focus may result in the use of clinical education strategies including peer observations, reflective practice groups, written self-reflections, and provision of effective feedback (Cook et al. 2019; Ho & Whitehill, 2009; Nottingham & Henning, 2014; Tillard et al., 2018.)

Conversely, intensive therapy environments allow for easy implementation of the experiential learning cycle (Kolb, 1984). A benefit of involvement in intensive treatment for students may be the repeated opportunities to perform a skill, reflect on performance and receive feedback, and repeat the skill with modified behaviour within a short timeframe and relatively stable context. For example, a student may be targeting improved use of therapeutic prompts and reinforcement in implementation of a language therapy. When working with a client intensively, the student has repeated opportunities to practice giving prompts and reinforcement within the same treatment approach, in therapy tasks that may not differ significantly between sessions, without a significant delay between opportunities to practice, and with a client with whom the student is beginning to build a rapport with and may be beginning to be able to predict their possible performance on treatment tasks. In this sense, intensive therapy environments may provide similar benefits to standardised patient clinics, which can also provide students with opportunities to practice a skill repeatedly within a stable learning environment (Syder, 1996).

As intensive therapy environments allow students to progress rapidly through the experiential learning cycle, the repeated exposures may enable SLT students to develop confidence and independence more quickly than in learning environments that do not enable such repetition. The benefits of repeated experience for international students or cultural and linguistically diverse (CALD) domestic students has been identified in previous studies (Attrill et al 2016a, 2016b, 2020). The results of these studies have suggested that international and CALD domestic students may require additional support in clinical placements due to the extra learning demands they face. Field supervisors reported that one such support could be extended placement duration to enable these students to have additional time to complete the additional learning (Attrill et al. 2020). In situations where extended placement duration is not able to be implemented, the repeated exposure provided by an intensive therapy environment could provide an alternative placement structure that may support the learning of international and domestic CALD students as well as students of non-CALD backgrounds. In the open text section of the confidence survey, three of the SLT student participants acknowledged that they perceived the repeated opportunities to practice assessment and/or therapy techniques to be helpful in developing their clinical skills and confidence. Increased independence within sessions has been associated with positive placement outcomes, with studies finding that decreased independence or a lack of participation impedes the development of confidence, competence and learning outcomes (Herrington & Herrington, 2006; Smedley &. Morey, 2010). Additionally, once 'core skills' such as implementation of a therapy are mastered, students may then be able to change focus to other aspects of therapy provision, such as personalisation of therapy tasks, liaison with other services, and family engagement. An example of SLT students being able to extend their learning experience was provided in an investigation into the confidence SLT students had in interactions with people

with aphasia (Finch et al., 2013). Finch et al. (2013) suggested that once SLT students were equipped with the knowledge or confidence to use communication strategies effectively, the students could then focus their learning experiences not on building foundational interpersonal skills but on specific clinical domains such as clinical reasoning. This could have been occurring for student participants within this study, as the client participants interviewed described receiving personalised therapy materials. The results serve to support the theory that intensive treatment services benefit students by providing opportunities to develop their clinical competence and confidence through rapid progress through the experiential learning cycle.

Another potential benefit of block field placements within an intensive therapy service may be the effect on cognitive load. As described previously, block field placements can be a period of high cognitive load due to a combination of intrinsic load (such as responding to an unfamiliar organisation's policies, responding to client factors, developing relationships, learning clinical skills), extraneous load (how the information is presented), and germane load (learning process implemented by the learners) (Sewell, et al., 2019; Sweller, 2011; van Merrienboer & Sweller, 2010). Reducing intrinsic and extraneous load while optimising germane load results in increased learning ability for students, while high levels of cognitive load negatively affect performance and learning ability (Sewell et al., 2019). An intensive treatment service's learning environment may adjust the extraneous load by providing additional structure while limiting the number of total clients, resulting in a reduced number of client personal factors, diagnostic factors, assessments, and treatment types a student must explore at any one time. These reductions provide students with an increase in working memory resources that can then attend to the intrinsic and germane load of other tasks (van Merrienboer & Sweller, 2010; Sweller, 2011). This may make intensive treatment services an

ideal block field placement environment for students who require assistance to lessen cognitive load, such as students adjusting for culture, language, or learning style, or students experiencing high stress (Attrill et al. 2015, 2016a, 2020; Davenport, 2018).

Similarly, intensive treatment services may provide a beneficial learning environment through the provision of greater stability during a period of rapid learning and possible stress. Block field placements are known to be a period of increased stress for some SLT students, who may experience stressors relating to finances, familial responsibilities, transport issues, concerns about clinical abilities, and self-expectations (Chan et al., 2020; Deasy et al., 2016; Doggrell & Schafer, 2016; Gillett-Swan & Grant-Smith, 2018; Quigly et al., 2020). An inability to manage stress may limit ability to learn, improve clinical performance, and carry out duty of care, and is therefore linked to lower performance, increased risk of failure, and drop-out. Anxiety is similarly linked to reduced ability to learn, with a study by Hill, Davidson, and Theodoros (2013) finding that anxiety and low-confidence in students can lead to reduced capacity to meet competency requirements. Time management skills, organisation skills, personal coping strategies, and peer support have been suggested to reduce the effects of stress on students during block field placements (Davenport et al., 2018; Quigley et al., 2020). For students providing intensive treatment, their session plans and daily or weekly schedules may be more predictable. By providing some stability, intensive treatment services may create a learning environment that lessens the impact of stress. Furthermore, once a relationship is established with a client, the anxiety of meeting someone new and building a rapport may diminish. The outcomes of this study supports this interpretation, with all of the SLT student participants self-reporting experiencing low levels of anxiety during the block field placement.

Finally, the development of a genuine relationship between students and clients is expected to be mutually beneficial. In survey feedback, one SLT student participant reported that providing intensive treatment in an authentic clinical setting enabled them to feel more "useful or effective". Direct service provision to clients is known to provide students with a sense of satisfaction while improving student participation and learning outcomes (Smedley & Morey, 2010). Noting that the client participants within this study all commented on feeling heard, and noticing that the treatment they received from SLT students was reported to be personally relevant and individualised, development of a genuine relationship may encourage students to view clients more holistically and adjust their management plans accordingly. The development of a genuine relationship is expected to provide greater collaboration between SLT students and their clients in clinical decision making, resulting not only in a sense of achievement for students but also better outcomes and greater treatment satisfaction for the clients involved. Physiotherapy students have previously reported that investing time in listening to clients promoted collaboration and enabled students to view their clients as individual people (Rindflesh et al., 2013). It should be recognised that intensive treatment has been reported to create challenges in regards to managing professional boundaries for speech-language therapists who were providing highly intensive treatment of 9 hours a week (Gunning et al., 2017). Shifts in professional boundaries have also been reported by speech-language therapists involved in social aphasia groups, due in part to prolonged contact with clients (Sherratt & Hersh, 2010). The total cumulative intervention frequency was significantly higher in both of those situations (due to high weekly dose in Gunning et al.'s (2017) study and due to extended duration in Sherratt and Hersh's (2010) investigation than in the present study. However, SLT students should be supported by their field supervisor while engaged in intensive treatment provision to identify and address issues regarding professional boundaries.

The provision of intensive treatment in the context of the whole learning environment must also be considered. Each students' unique relationship with their clinical field supervisor has been shown to affect students' perceptions of confidence and satisfaction with learning opportunities (Jesse, 2016; Kanno & Koeske, 2010; Lee, 2008; O'Brien et al., 2019). The clinical field supervisors' personal beliefs, attitudes and practice style is also likely to affect the opportunities and priorities of student development. A positive supervisory relationship between the student and field supervisor is described as a partnership built on trust, mutual respect, and empathy (Geller & Foley, 2009). Recent research conducted in the Republic of Ireland explored SLT students' perceptions of features that enhance a block field placement (Quigly et al., 2020). 117 SLT students responded to an anonymous online survey which consisted of eight open-ended questions encouraging exploration of post placement experiences and preferences for future placements. Respondents to Quigly and colleagues' (2020) survey described how they valued empathy in their fields supervisors, with perceptions of being valued leading to increased self-esteem, confidence, and motivation to learn. However, some challenges of the collaborative supervisory relationship are the conflict of the supervisor being both the assessor and teacher, prioritization of caseload demands, or a view of supervision as being unidirectional (Barrett & Barber, 2005; Heaslip & Scammell, 2012; Finch, 2013). A supervisor's level of skill in utilizing clinical education strategies or providing feedback can result in less effective clinical supervision (Burgess & Mellis, 2015; Groves et al., 2015; Nash & Winstone, 2017). Further investigation into the experiences of a larger number of SLT students would help to explore the impact of the supervisory relationship within the context of an intensive treatment model, as would research exploring the perspectives of field supervisors in intensive treatment services.

Intensive treatment services therefore provide learning environments inherent with opportunities to support students' learning. They provide a structure that supports a reduction in cognitive load and stress while enabling repeated progress through the experiential learning cycle, thereby enhancing the development of clinical competency and confidence. Therefore, intensive treatment learning environments could be preferable options due to increased predictability, repeated opportunities to practice skills, and opportunities to develop interpersonal communication skills and therapeutic relationships. These students could include "struggling" students or students from different cultural and linguistic backgrounds who experience different challenges than domestic students (Attrill et al. 2015, 2020).

4.2 Client Participants' Perceptions of Intensive Treatment Implemented by SLT Students

The second research question was "what are clients' perceptions of intensive therapy services provided by students?" The feedback from client participants regarding their perceptions of receiving intensive treatment implemented by SLT students was overwhelmingly positive. Client participants described the treatment they received as effective, reporting on achieving changes in their impairment and achieving or progressing towards rehabilitation goals. Clients commented that intensive therapy was worth the effort, more valued than less intensive treatment, and needed to be provided at a stage in the rehabilitation journey that suited the individual. Clients also described perceiving the SLT students to be competent practitioners, developing an authentic relationship with the SLT student they worked intensively with, and feeling heard and valued as a person.

Optimal therapeutic intensity levels for communication and swallowing impairments following stroke and other neurological injuries is a growing area of literature. The NZ Stroke Clinical Guidelines recommend provision of as high an intensity as can be tolerated by the client (Stroke Foundation of NZ & NZ Clinical Guidelines Group, 2012). This can lead to logistical challenges for clients who have multiple deficits across linguistic, cognitive, physical and functional domains requiring the input from several health professionals while also undergoing significant emotional and social adjustment (Pierce et al., 2020). High intensity therapy has been associated with a higher rate of patient drop-out (Barkheit et al., 2007). Fatigue, expectations of therapy, and readiness for rehabilitation have been identified as client factors affecting engagement in intensive rehabilitation post-stroke . Provision of high intensity therapy also poses challenges to clinicians and services (Code & Petheram, 2011; Babbitt et al., 2013; Rose et al., 2014; Shrubsole et al., 2018). The present reality of aphasia provision is that people with aphasia often have less access to treatment than is recommended in clinical guidelines and literature (Bhogal et al., 2003; Code & Heron, 2003; Katz et al.,. 2000; Kurland et al., 2010; Pulvermuller & Berthier, 2008; Verna et al., 2009; Yeo et al., 2016). Concurrently, exploration of the views of people who have had a stroke shows that clients want access to more rehabilitation (Janssen et al., 2010; Worrall et al., 2011).

The results of this study add to the literature demonstrating that people with communication and swallowing impairments desire access to more treatment (Worrall et al., 2011). Client participants negotiated their preferred treatment dose (median 60 minutes per session) and dose frequency (average 3 times per week) at the beginning of SLT input. In the interviews after treatment had been completed, the majority of client participants reported that if offered the opportunity, they would increase the dose, dose frequency, duration and cumulative

intervention frequency of intensive SLT. It is possible that this discrepancy between the preferences for less intensive treatment at the beginning of input and a greater number of sessions at the end of input might reflect improvements in fatigue, re-adjustment to home-life after time in hospital, familiarity with demands of treatment and improved scheduling, and the completion of shorter interventions from other allied health disciplines. With the reports from client participants demonstrating that they mostly found intensive treatment manageable and would like to intensity but with no clear consensus about what treatment schedule would suit everyone, it is clear that intensive treatment should be planned collaboratively between clients and clinicians, and regularly reviewed and changed as required.

Client participants acknowledged that intensive treatment posed multiple challenges. The content of intensive treatment was described as a "good challenge" which required significant cognitive energy and could result in increased levels of fatigue after the session had been completed. Client participants described needing to schedule their appointments (including social visits, intensive treatment sessions, and other health visits) around each other, and include scheduled downtimes to recuperate from fatigue. Despite a high number of health visits and co-occurring fatigue, client participants reported that they typically did not have to cancel social visits or stop engagement in usual activities to accommodate the intensive treatment. Rather, they were able to arrange their schedules in order to attend all of the above. Client participants described the effort spent in scheduling as being a worthwhile endeavour as it enabled them to access the intensive treatment which they reported valuing highly.

The results of this study are similar to that of a study that explored the perceptions of patients receiving intensive physiotherapy input post stroke (Janssen et al., 2020). The participants of

both studies displayed a positive attitude regarding working hard and believed that intensive treatment was beneficial to their recovery. In both studies, participants acknowledged that intensive treatment could be challenging, with one participant within Janssen et al. (2020) study describing the demands as "daunting", however were positive about working at more intense levels. Like the participants within this study, physiotherapy patients found they were able to fit the additional treatment sessions into their routines and perceived no barriers towards the implementation of higher intensity treatment. The patients' physiotherapists were also interviewed as part of the study. Their responses shared the perception of intensive rehabilitation as being beneficial, but found system level aspects, such as staffing and access to necessary resources, to be barriers for further implementation.

Additionally, client participants described intensive SLT as having a "right time" within the stroke rehabilitation journey which likely varies from person to person. Some client participants found that they were able to tolerate intensive treatment immediately following their transfer from an inpatient rehabilitation unit to the community. Other client participants who were seen later in their stroke journey identified that they may have found intensive treatment overwhelming if it had been offered earlier in their recovery. This was the experience of one client participant who, though still reported receiving the benefits of making progress, being heard and establishing a genuine relationship with the SLT student, found that she was unable to participate in treatment with the intensity that had initially been planned. Client participants within the subacute phase of recovery (<6 months post-stroke) and chronic phase of recovery (>12 months) all reported perceiving the benefits of intensive SLT in terms of achieving rehabilitation goals and feeling supported by the SLT student. Previous research has identified that timing of access to intensive treatment post-stroke should be considered. Intensive aphasia treatment provided acutely (>3 months) and sub

acutely (3-6 months) post-stroke has been associated with higher rates of drop-out due to illness, fatigue, or disengagement (Bakheit et al, 2007; Brady et al., 2016). Increased aphasia treatment intensity has not been shown to result in higher rates of drop-out in the chronic phase (Brady et al., 2016). Previous interviews with people with aphasia have shown that clients have different wants and needs of SLT as their stroke recovery progresses (Worrall, 2011). The timing of when treatment is offered along the recovery journey is an important consideration for the planning and delivery of rehabilitation services. These perceptions from client participants highlight the need for collaborative development of rehabilitation plans that are responsive to clients' changing preferences throughout their stroke rehabilitation journey.

In addition to valuing the intensity of the treatment, client participants also described valuing the input of the SLT students. The client participants reported enjoying the visits of the SLT students, who they viewed as competent and personable.

It was not initially easy for client participants to articulate why they viewed the SLT students they worked with as competent, describing this as something of a "gut feeling". As client participants reflected on their experiences, however, it became apparent that small acts such as personalising treatment targets and progressing the difficulty of therapy tasks appropriately were viewed as signs of competence. Client participants viewed the SLT students as having expert knowledge of stroke and its complications, and had faith in recommendations the SLT students' provided. None of the client participants raised any concerns about the level of competence of the SLT students, and all reported their perception of having received quality treatment . The client participants were aware that the students involved in their care were in

the final year of study. Some of the participants acknowledged that they may have felt less confident working with students in an earlier stage of their degree. It could be inferred from these reports that knowing the students were in their final year of study provided an expectation or belief that the SLT students would be competent to practice under supervision.

These findings of perceived student competence add to studies demonstrating that clients perceive experiences of students in health services to be positive (Asanad et al., 2018; Forbes & Nolan, 2018; Lawrence et al, 2015). Particular comparisons can be drawn with the results of a survey of client satisfaction with SLT students in private practice (Sokkar et al., 2019). Like the client participants of this study, the parents and caregivers interviewed were satisfied with the treatment they had received and viewed the SLT students they worked with to be as professional and competent as a qualified clinician. Sokkar et al. (2019) noted that the participants described similar attributes and characteristics as being indicators of student competence, such as appearing confident, knowledgeable, organised and enthusiastic.

While client participants attributed the therapy approaches and tasks as being the direct work of the SLT students, it must be acknowledged that the students were operating under the supervision of a clinical field supervisor with experience and knowledge in rehabilitating communication and swallowing impairments following stroke. The client participants within the study were naïve as to the processes of clinical education operating "behind the scenes" and therefore unaware of the level of support an SLT student may have required to practice in this "competent" way. However, by comparing the client participants' perceptions of competence against the formal assessments of SLT students participants' competency and

SLT student participants' self-ratings of confidence, we can see that these three perceptions or measures of ability are congruent with each other. This study did not provide a comparison of how clients perceived intensive treatments provided by less-experienced SLT students. Further research into intensive treatment implemented by SLT students may explore client perceptions of student competency across year levels.

Emphasis was also placed on the ability of SLT students to "get on with" the clients. Client participants valued the relationship they developed with the SLT student. Participants with communication impairments felt supported by SLT students to share their thoughts, ideas, and opinions. Client participants also observed that SLT students conducted themselves respectfully. Behaviours that were noted to be signs of a good relationship were sharing of some personal information, humour, and physical touch. Client participants' reported feeling more than "basic rapport" and demonstrated genuine interest in the SLT students while reporting feeling a real connection.

The repeated exposure through intensive treatment is likely to have enabled the SLT students to identify and practice appropriate strategies to maximise effective communication with their clients. Successful use of communication strategies has an effect on relationship-building with people with communication impairment (Bright et al., 2021). The SLT students' abilities to use conversational strategies to support successful communication is expected to be a significant contributor to the development of an effective therapeutic relationship with this client population. The high number of exposures also provided additional opportunities for clients and students to understand each other better by virtue of simply spending extra hours in each other's company than would often be the norm. There are considerably more

opportunities for relationship development when three hours a week are spent in face-to-face sessions compared to the total of 2 face-to-face SLT sessions over 57 days received by clients in Yeo et al.'s findings (2016).

Further comparisons can be drawn between the responses of client participants within this study and those of Janssen et al. (2020). Patients in that study perceived the benefits of intensive treatment to result from the therapeutic relationship with enhanced access to their therapist providing additional guidance and motivation as they progressed through their recovery journey. They viewed their relationship with their therapist positively, describing the therapist as a mix of coach and motivator. An interesting comparison existed in the way patients and the therapists perceived the intervention differently in this study; "Patients thought it consisted of having additional time with their therapists, who they saw as coaches to get them through this difficult time. Conversely, the therapists described the intervention in mechanistic terms, such as levels of intensity and number of steps in each training session" (Janssen et al., 2020). Another study of intensive physiotherapy post-stroke had some similar findings (Peiris et al., 2012). The study by Peiris et al. (2012) was also completed in an inpatient rehabilitation setting, but compared a 5 day a week service with a 6 day a week service. Patients reported satisfaction with either frequency, and in their interviews described valuing a positive relationship with the therapist more than the intensity of the therapy. The participants within these two studies identified that the relationship developed through the course of intensive therapy was beneficial and valued (Janssen, et al., 2020; Peiris et al., 2012). The findings of this study are congruent with those results, as client participants acknowledged the relationship they developed with the SLT students while receiving intensive therapy to be highly valued.

A growing body of literature is emerging that acknowledges the importance of relationship-building in rehabilitation and clinical practice (Bright et al., 2018; Lawton et al., 2018a, 2018b, Worrall et al., 2010). The results of this study add to this knowledge base and confirm earlier findings that the therapeutic relationship between client and clinician is important for engagement in and satisfaction with rehabilitation. Previous research into the role of therapeutic relationships in rehabilitation have identified that the relationship between the clinician and client is of particular importance to people with communication impairment (Bright et al., 2017, 2018; Lawton et al., 2020). Therapeutic relationships, also referred to as therapeutic alliances, working alliances, therapeutic connections and therapeutic bonds in clinical literature are authentic relationships distinct from rapport (Kayes et al., 2015; Walsh & Duchan, 2011). Rapport building is often demonstrated as a discrete, relatively short interaction prior to engaging in clinical activities, whereas therapeutic relationships are attended to throughout each interaction and can be considered a more authentic, holistic connection (Bright et al., 2018). Therapeutic relationships can promote engagement in rehabilitation, client satisfaction, and therapeutic outcomes (Bright et al., 2017, 2018; Lawton et al., 2018, 2020). Factors identified to promote the development of a therapeutic relationship include time, clinician responsiveness, emotional connectedness, and recognition of the person with aphasia as an individual (Bright et al., 2017, 2018; Lawton et al, 2018a, 2018b, 2020; Worrall et al., 2010). A recent single case study of a speech language therapist-patient dyad in an inpatient stroke rehabilitation ward demonstrated that organisational structure, policies and expectations can impact on the opportunities to develop therapeutic relationships, even if relationships are valued by the clinician (Bright et al., 2021).

Additionally, exploration of the social networks of people with aphasia have shown a loss or change in friendships associated with the onset of aphasia (Brown et al., 2012). That study showed that the development of new relationships was of particular value to people with communication impairments, and this may be in evidence when the client participants of the current study reported highly valuing the meaningful, genuine connection they perceive to have developed with SLT students during intensive therapy programmes. The three specific behaviours that client participants of this study identified as being important for relationship building were sharing of personal information, humour, and physical touch.

Sharing information unrelated to stroke or therapy activities appeared to make client participants feel more connected. Sharing of personal information has also been reported as building relationships in other studies exploring the perceptions and preferences of people with aphasia (Bright et al., 2018; Lawton et al., 2018a). People with aphasia interviewed in both of these studies reported appreciating when a health professional shared limited personal information through authentic interactions over time, as it gave patients a sense of who the practitioner was as a person rather than a disconnected professional (Bright et al., 2018; Lawton et al., 2018a). Lawton et al. (2018a) identified that people with aphasia placed greater importance on social talk and getting to know each other in intensive treatment or treatment of longer duration. Additionally, some speech-language therapists have described intentionally using self-disclosure to build connection and create a more balanced relationship (Lawton et al., 2018b).

Similarly to the client participants in the current study, patients and health professionals within Bright et al.'s (2018) study also acknowledged that non-verbal communication

including laughter and touch promoted a sense of relationship. Some research has been completed exploring the role of laughter and humour in aphasia rehabilitation. Humour promotes unity, displaying affiliation and developing intimacy while also being capable of reducing embarrassment and feelings of disconnection (Sherratt & Simmons-Mackie, 2016; Lawton et al., 2018b). Studies of humour for people with aphasia have shown that use of humour acknowledges the competency of the person with communication impairment and promotes their participation within conversation (Madden et al., 2002). Use of humour may also increase self-confidence and positive self-identity for people with aphasia (Sherratt & Simmons-Mackie, 2016; Veselka et al., 2010). In therapy, shared use of humour can equalise the perceived power dynamic between clinicians and clients, develop rapport, enhance motivation and encourage greater participation (Sherratt & Simmons-Mackie, 2016). However, effective use of humour requires familiarity between clinician and client, as inauthentic use of humour or humour not "in tune" with the client can have negative effects on client satisfaction and rapport (Astedt-Kurki et al., 2001). Humour can therefore be considered a tool to support ongoing development of a collaborative partnership and as an indicator of a successful therapeutic relationship.

The role of appropriate physical contact in therapeutic relationships is less defined. Touch can be described as instrumental or expressive (Morris et al., 2014). Instrumental touch is functional, used for the purpose of a task such as transferring a client from wheelchair to bed. Expressive touch is spontaneous and affective, often involving the practitioner touching the client's forearm, shoulder or hand, or a hug. The touch valued by client participants within this study was the expressive type. Patients with communication disability within Bright et al.'s (2018) study also identified that expressive touch was one element of non-verbal communication that helped develop a sense of connectivity. The use of expressive

touch can also be an appreciated expression of a health professional's empathy (Orioles et al., 2013). Expressive touch has been shown to increase rapport and connectedness between health professionals and their clients (Adomat & Killingworth, 1994; Davidhizar & Newman, 1997; Evdarsson et al., 2003). Furthermore, expressive touch has been found to have positive effects on diminishing feelings of isolation, changes to body image or level of dependence, and self-esteem and quality of life, particularly in the elderly (Belgrave, 2009; Oliver & Redfern, 1991; Mammarella et al., 2010). However, the parameters of 'acceptable' professional physical contact can be a difficult area to navigate, and different attitudes towards touch exist amongst health professionals and clients (Joshi et al., 2010). In the present study, the two client participants who identified physical contact as being a sign of a good relationship were both of Māori and Pasifika backgrounds, whereas the other clients, who were of NZ European backgrounds, did not specifically report physical contact as a sign of a good relationship. More importance may be placed on physical touch in different cultures. In an exploration of rapport building in community mental health, Māori social workers described using elements of tikanga (custom) and whanaungatanga (relationship) including touch as well as awhi (embrace, support), music, waiata (song), and spiritual connection to guide the development of relationships with Māori rangatahi (adolescents) (Walsh-Mooney, 2009). Although the evidence base is limited, studies suggest that expressive touch can be a valuable tool in developing therapeutic relationships particularly with people who have a communication impairment.

Another theme developed from the client participants' interviews was the feeling of being heard. Client participants described perceiving that the SLT students saw and valued them as people. Actions such as SLT students' responsivity to clients' requests and collaboration with clients and families on management plans were described as elements of treatment that made

client participants feel heard. Such responsivity included changing treatment activities, creating home practice resources, and reducing the length of a treatment session at clients' requests. Some participants contrasted this with previous experiences in their stroke rehabilitation journey in which they did not feel heard by their health professionals, resulting in a disconnect between client and clinician, less effective clinical management, and reduced client satisfaction. These results add to the literature base which has reported on people with communication impairments' need to have their views understood (Bright et al., 2018; Bright & Reeves, 2020; Lawton et al., 2018a). Lawton et al. (2018a) describe how several participants with aphasia reported an ongoing struggle to retain a self of identify post-stroke and therefore particularly valued therapists' attempts to "see the person". People with communication disorders read the underlying intent and attitudes underlying the communication behaviours of health professionals and respond positively when they felt validated; that is, the person with the communication disorder perceived the health professionals saw them as a person and had genuine interest and concern for them (Bright & Reeves, 2020). People with a communication disorder desire to be seen as an individual, "as someone who has value, competence, and intelligence, and whose needs, emotions and perspective are important" (Bright & Reeves, 2020, p.8). Client participants within this study described feeling heard or valued as individual by the SLT students.

The experiences of the client participants in this study add the literature base about tolerance of intensive treatment and perceptions of student involvement in healthcare. It adds to evidence that clients perceive themselves to receive quality management in student-delivered treatments, and value having students involved in their care. Additionally, the results add to evidence that clients appreciate access to intensive treatment post-stroke, reporting that

intensive treatment helps them achieve progress in recovery and access to supportive relationships with the intensive treatment provider.

4.3 Practice Implications

Intensive treatment provided by SLT students under the guidance of an experienced clinical field supervisor does not appear to have any significant negative effects for either the students or the clients. This model of block field placement could provide services with the opportunities to provide clients with access to a greater intensity of treatment than the norm, while also providing appropriate opportunities to develop the clinical and professional competencies and self-confidence of SLT students. Intensive placements may support international or CALD students who as per Attrill et al. (2015, 2016a, 2016b, 2020) would benefit from repeated experiences that this placement model offers.

It is recommended that students who are providing intensive treatment to clients be encouraged to explore transference of skills and knowledge into other clinical areas or cases to help reduce any lack of confidence the exposure to a smaller range of clients might provide. Opportunities to help transference may include self-reflection, vicarious learning through discussions with peers, applied readings or theoretical case discussions, or careful selection of clinical opportunities over the course of the degree to ensure a wide range of exposure. Intensive treatment learning environments could also be explored further to identify features that may enhance their effectiveness for students, and to identify which type of student may benefit the most from this particular model.

4.4 Study Limitations

The small participant sample associated with this study limits the generalizability of the results. Findings are representative of one- year-level of study and a small number of clients. Additional research is required to explore impact on greater numbers of participating students. Comparative studies are also required that further explore the effects of student and client characteristics and other features of the learning or rehabilitation environment.

Additionally, thematic analysis drew heavily on what was explicit in the data and could not conceivably capture every nuance of context or individual experience. Although opportunities for client participants to review the transcripts was offered, member checking (providing interpretations to participants for comment) to validate conclusions was not completed as this can potentially coerce participants to prolong engagement with the study (Sandelowski, 2002). In understanding the results, it must be acknowledged that the client participants' reports of their experiences are understood to be true to them within the framework of the environment within which they live, and therefore other individuals may have different experiences or interpretations. Increasing the number of client participants through further interviews or focus groups would enrich the data by allowing perspectives from other individuals' experiences and backgrounds to be shared. Additionally, clients who opt to participate in intensive treatment provided by SLT students are a self-selecting group, likely to reflect those motivated to participate in treatment with a generally positive disposition towards clinical education. Clients who did not feel SLT input was a priority for them would have been unlikely to agree to intensive treatment. Similarly, clients who had concerns about the level of skill students may perform at would have been unlikely to consent to student involvement. Further studies may investigate the numbers of clients who would decline such input and explore the reasonings behind this choice.

It must be also acknowledged that 4 of the 7 participants completed their clinical placement in the year 2020 during an international pandemic while 6 of the client participants received their intensive SLT input in the same time period. The possible effects of the pandemic on learning and rehabilitation in human subjects is not well understood. This makes it difficult to make meaningful generalisations when comparing student performance against historical data.

4.5 Future Research Directions

Further study that investigates the effects of having block field placements within intensive treatment services on the development of SLT students' competency and confidence across year levels is warranted. Additionally, studies that explore differences in SLT students' perceptions and preferences on block field placements through focus groups and exploration of the experiences, confidence and competence of a 'control' group of SLT students on placement within a service that does not have a focus on intensive therapy provision would further strengthen the interpretation of these results. Furthermore, exploration of the perceptions of field supervisors supporting SLT students on intensive block field placements would provide further insight into the effects of intensive treatment models into development of SLT student confidence and competence.

And finally, further research exploring client participants' experiences of intensive treatment compared with non-intensive treatment, differing year levels of students, comparing experiences of intensive treatment in subacute and chronic phases of recovery, and sharing the perspectives of a large number of participants will enrich the data on clients' experiences.

4.6 Conclusions

This study aimed to explore the effect that providing intensity therapy to clients with communication and swallowing impairments post-stroke may have on the development of competency and confidence with SLT students, and also to explore the experiences of clients who received intensive treatment provided by an SLT student.

The study found that intensive service provision does not have a negative effect on the development of clinical competency and confidence of fourth-year SLT students. It identified that an intensive treatment environment may provide benefits to students by reducing stressors and cognitive load, while providing additional opportunities for repeated practice of clinical skills. The results also suggest that when providing block field placement within an intensive therapy service, the clinical field supervisor should be aware of the possible additional challenges students may experiences in maintaining professional boundaries and recognising the transferability of occupational and professional competencies, and utilise clinical education strategies to support the students accordingly.

The study also found that clients have positive perceptions of intensive therapy services provided by SLT students. It showed that clients value the opportunity to engage in intensive treatment in community services and perceive that engagement in intensive treatment results in improved abilities and achievement of rehabilitation goals. Clients were highly motivated to engage in intensive treatment and willing to work to overcome barriers to access this support. The study also identified that conversations around appropriate intensity of treatments should be ongoing throughout rehabilitation as clients' preferences and abilities to engage in treatment may change. Regarding working with SLT students specifically, the

study found that clients perceived their students to be competent and capable, and developed an authentic relationship with the students that enhanced their experience of intensive treatment.

References

Adomat, R., & Killingworth, A. (1994). Care of the critically ill patient: the impact of stress on the use of touch in intensive therapy units. *Journal of Advanced Nursing, 19*(5)*,* 921.922. https://doi.org/10.1111/j.1365-2648.1994.tb01169.x

American Speech-Language-Hearing Association. (2014). *SLPs report stable productivity levels, more ethical challenges. ASHA Leader, 19,* 24. https://doi.org/10.1044/leager.AAG.19062014.24

American Speech-Language-Hearing Association. (2016). Does ASHA have productivity standards? What are "typical" productivity requirements in a hospital or skilled nursing facility. *Frequently Asked Questions: SLPs Working in Health Care*. http://www.asha.org/slp/healthcare/health_serv_FAQ/#productivity

American Speech-Language-Hearing Association. (2020). *2020 standards and implementation procedures for the certificate of clinical competence in speech-language pathology.* ASHA. Retrieved from https://www.asha.org/certification/2020-slp-certification-standards/

AlHaqwi, A. I., & Taha, W. S. (2015). Promoting excellence in teaching and learning in clinical education. *Journal of Taibah University Medical Sciences, 10*(1), 97-101. https://doi.org/10.1016/j.jtumed.2015.02.005

Aprile, K. T., & Knight, B. A. (2020). The WIL to learn: students' perspectives on the impact of work-integrated learning placements on their professional readiness. *Higher*

Education Research & Development, 39(5), 869-882. https://doi.org/10.1080/07294360.2019.1695754

Ash, S., Martin, E. K., Rodger, S., Clark, M., & Graves, N. (2015). Student and supervisor productivity change during nutrition and dietetic practice placements: a cohort study. *Nutrition and Dietetics, 72*(2), 163-169. https://doi.org/10.1111/1747-0080.12093

Asanad, K., Zheng, J., Chan-Golston, A., Tam, E., Bhetraratana, M., Lan, C. W., Zhao, M., Abdi, R., Abdi, F., Vasti, E., & Prelip, M. L. (2018). Assessing quality of care through client satisfaction at an interprofessional student-run free clinic. *Journal of Interprofessional Care*, *32*(2), 203–210. https://doi.org/10.1080/13561820.2017.1395827

Astedt-Kurki, P., Isola, A., Tammentie, T., & Kervinen, U. (2001). Importance of humour to client-nurse relationships and clients' well-being. *International Journal of Nursing Practice, 7*(2)*,* 119-125. https://doi.org/10.1046/j.1440-172X.2001.00287

Attrill, S., & Gunn, S. (2010). Clients becoming teachers: speech-language pathology students' understanding of rehabilitation following clinical practicum in a rehabilitation setting. *International Journal of Speech-Language Pathology, 12*(2), 142-151. https://doi.org/10.3109/17549500903490630

Attrill, S., Lincoln, M., & McAllister, S. (2015). International students in speech-language pathology clinical education placements: perceptions of experience and competency

development. *International Journal of Speech-Language Pathology, 17*(3), 213-234. https://doi.org/10.3109/17549507.2015.1016109

Attrill, S., Lincoln, M., & McAllister, S. (2016). Supervising international students in clinical placements: Perceptions of experiences and factors influencing competency development. *BMC Medical Education, 16*(1), 180-180. https://doi.org/10.1186/s12909-016-0702-5

Attrill, S., Lincoln, M., & McAllister, S. (2020). International students in professional placements: supervision strategies for positive learning experiences. *International Journal of Language & Communication Disorders, 55*(2), 243-254. https://doi.org/10.1111/1460-6984.12516

Attrill, S., McAllister, S., & Lincoln, M. (2016). Predictors of professional placement outcome: cultural background, English speaking and international student status. *Perspectives on Medical Education, 5*(4), 222-230. https://doi.org/10.1007/s40037-016-0289-x

Babbitt, E., Worrall, L., & Cherney, L. (2013). Clinician perspective of an intensive comprehensive aphasia program. *Topics in Stroke Rehabilitation, 20*(5), 398-408. https://doi.org/10.1310/tsr2005-398

Bakheit, A. M. O., Shaw, S., Barrett, L., Wood, J., Carrington, S., Griffiths, S., Searle, K., & Koutsi, F. (2007). A prospective, randomized, parallel group, controlled study of the effect of intensity of speech and language therapy on early recovery from poststroke

aphasia. *Clinical Rehabilitation, 21*(10), 885-894. https://doi.org/10.1177/0269215507078486

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review, 84,* 191-215. https://doi.org/10.1037/0033-295X.84.2.191

Barrett, M., & Barber, J. (2005). A developmental approach to the supervision of therapists in training. *Journal of Contemporary Psychotherapy, 35,* 169-183 https://doi.org/10.1007/s10879-005-2698-8

Barthel, G., Meinzer, M., Djundja, D., & Rockstroh, B. (2008). Intensive language therapy in chronic aphasia: which aspects contribute most? *Aphasiology, 22*(4), 408-421. https://doi.org/10.1080/02687030701415880

Basso, A. (2005). How intensive/prolonged should an intensive/prolonged treatment be? Aphasiology, 19(10-11), 975-984. https://doi.org/10.1080/02687030544000182

Belgrave, M. (2009). The effect of expressive and instrumental touch on the behavior states of older adults with late-stage dementia of the Alzheimer's type and on music therapist's perceived rapport. *The Journal of Music Therapy, 46*(2), 132-146. https://doi.org/10.1093/jmt/46.2.132

Bhogal, S. K., Teasell, R., Speechley, M. (2003). Intensity of aphasia therapy, impact on recovery. *Stroke, 34*(4), 987-993. https://doi.org/10.1161/01.STR.0000062343.64383.D0

Bourne, E., McAllister, L., Kenny, B., & Short, K. (2020). Student pathologists' perceptions of the impact of student supervision. *International Journal of Practice-based Learning in Health and Social Care, 8*(2), 1-15. https://doi.org.10.18552/ijpblhsc.v8i2.549

Bourne, E., McAllister, E., Nagarajan, S., & Short, K. (2019). The effect of speech language pathology students on clinician time use and activity. *International Journal of Speech & Language Pathology, 21*(2), 163-174. https://doi.org/10.1080/17549507.2017.1416175

Boyle, M. (2015). Semantic feature analysis treatment for aphasia word retrieval impairments: what's in a name? *Topics in Stroke Rehabilitation, 17*(6), 411-422. https://doi.org/10/1310/tsr1706-411

Brady, M. C., Kelly, H., Godwin, J., Enderby, P., & Campbell, P. (2016). Speech and language therapy (SLT) for aphasia after stroke: Cochrane systematic review of evidence for therapy regimens, delivery models and theoretical approaches. *Cochrane Database of Systematic Reviews, 1*(6). https://doi.org/10.1002/14651858.CD000425.pub4

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Quality Research in Psychology, 3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health, 11*(4), 598-597. https://doi.org/10.1080/2159676X.2019.1628806

Briffa, C., & Porter, J. (2013). A systematic review of the collaborative clinical education model to inform speech-language pathology practice. *International Journal of Speech-Language Pathology, 15*(6), 565-574. https://doi.org/10.3109/17549507.2013.763290

Bright, F. A. S., Kayes, N. M., Cummins, C., Worrall, L. M., & McPherson, K. M. (2017). Co-constructing engagement in stroke rehabilitation: a qualitative study exploring how practitioner engagement can influence patient engagement. *Clinical Rehabilitation,* 31(10), 1396-1405. https://doi.org/10.1177/0269215517694678

Bright, F. A. S., Kayes, N. M., McPherson, K.M. , & Worrall, L. E. (2018). Engaging people experiencing a communication disability in stroke rehabilitation: a rehabilitative study. *International Journal of Language & Communication Disorders, 53*(5), 981-994. https://doi.org/10.1111/1460-6984.12409

Bright, F. A. S., Attrill, S., & Hersh, D. (2021). Therapeutic relationships in aphasia rehabilitation: Using sociological theories to promote critical reflexivity. *International*

Journal of Language & Communication Disorders, 56(2), 234-237. https://doi.org/10.1111/1460-6984.12590

Bright, F. A. S., & Reeves, B. (2020). Creating therapeutic relationships through communication: a metasynthesis from the perspectives of people with communication impairment after stroke. *Disability and Rehabilitation, Volume ahead-of-print*, 1-13. https://doi.org/10.1080/09638288.2020.1849419

Brown, T., Williams, B., McKenna, L., Palermo, C., McCall, L., Roller, L., Hewitt, L., Molloy, L., Baird, M., & Aldabah, L. (2011). Practice education learning environments: the mismatch between perceived and preferred expectations of undergraduate health science students. *Nurse Education Today, 31*(8)*,* 22-28. https://doi.org/10.1016/j.nedt.2010.11.013

Brown, K., Worrall, L. E., Davidson, B., & Howe, T. (2012). Living successfully with aphasia: a qualitative meta-analysis of the perspectives of individuals with aphasia, family members, and speech-language therapists. *International Journal of Speech-Language Pathology, 14*(2), 141-155. https://doi.org/10.3109/17549507.2011.632026

Burgess, A., & Mellis, C. (2015). Feedback and assessment of clinical placements: achieving the right balance. *Advances in Medical Education and Practice, 6,* 373-381. https://doi.org/10.2147/AMEP.S77890

Chan, J., Carter, S., & McAllister, L. (1994). Anxiety related to clinical education in speech-language pathology students. In M. Bruce (Ed.), *Proceedings of the 1994*

International & Interdisciplinary Conference on Clinical Supervision: Toward the 21st Century (pp. 126-132). Council of Supervisors in Speech Language Pathology and Audiology.

Cherney, L. R., Babbitt, E. M., Semik, P., & Heinemann, A. W. (2011). Psychometric properties of the communication confidence rating scale for aphasia (CCRSA): Phase 1. *Topics in Stroke Rehabilitation, 18*(4), 352-360. https://doi.org/10.1044/2015_AJSLP-14-0164

Claeys, M. D., Deplaecie, M., Vanderplancke, T., Delbaere, I., Myny, D., Beeckman, D., & Verhaeghe, S. (2015). The difference in learning culture and learning performance between a traditional clinical placement, a dedicated education unit, and work-based learning. *Nurse Education Today, 35*(9), 70-77. https://doi.org/10.1016/j.nedt.2015.06.016

Clynes, M. P., & Rafferty, S. E, C, (2008). Feedback: an essential element of student learning in clinical practice. *Nursing Education in Practice, 8*(6), 405-411. https://doi.org/10.1016/j.nepr.2008.02.003

Code, C., & Heron, C. (2003). Services for aphasia, other acquired adult neurogenic communication and swallowing disorders in the United and Kingdom, 2000. *Disability and Rehabilitation, 25*(21), 1231-1237. https://doi.org/10.1080/0963828031000159961

Code, C., & Petheram, B. (2011). Delivering for aphasia. *International Journal of Speech-Language Pathology, 13*(1), 3-10. https://doi.org/10.3109/17549507.2010.520090

Cook, K., Tillard, G., Wyles, C., Gerhard, D., Ormond, T., & McAuliffe, M. (2019). Assessing and developing the written reflective practice skills of speech-language pathology students. *International Journal of Speech-Language Pathology*, *(21)*1, 46-55. https://doi.org/10.1080/17549507.2017.1374463

Davenport, R., Hewart, S., Ferguson, A., McAllister, S., & Lincoln, M. (2018). Struggle and failure on clinical placement: a critical review. *International Journal of Language & Communication Disorders, 53,* 218-227. https://doi.org/10.1111/1460-6984.12356

Davidhizar, R., & Newman, J. G. (1997). When touch is not the best approach. *Journal of Clinical Nursing, 6*(3)*,* 203-206. https://doi.org/10.1111/j.1365-2702.1997.tb00305.x

Deasy, C., Coughlan, B., Pironom, J., Jourdan, D., & Mannix-McNamara, P. (2016). Psychological distress and help seeking amongst higher education students: findings from a mixed methods study of undergraduate nursing/midwifery and teacher education students in Ireland. *Irish Educational Studies, 35,* 175-195. https://doi.org/10.1080/03323315.2016.1146157

Deguara, B. (2020, March 23). *Live: PM Jacinda Arden to give update on coronavirus alert level.*
Stuff. https://web.archive.org/web/20200323005056/https://www.stuff.co.nz/national

/health/coronavirus/120495548/live-pm-jacinda-ardern-to-give-update-on-coronavirus-alert-level

Dignam, J., Copland, D., McKinnon, E. (2015). Intensive versus distributed aphasia therapy: a nonrandomised, parallel-group, dosage-controlled study. *Stroke, 48*(8), 2206-2211. https://doi.org/10.1161/STROKEAHA.115.009522

Dignam, J., Rodriguez, A, & Copland, D A. (2016) Evidence for intensive aphasia therapy: considerations of theories from neuroscience and cognitive psychology. *PM & R: The Journal of Injury, Function, and Rehabilitation, 8*(3), 254-267. https://doi.org/10.1016/j.pmrj.2015.06.010

Doggrell, S. A., & Shafer, S. (2016). Reduced withdrawal and failure rates of accelerated nursing students enrolled in pharmacology is associated with supportive intervention. *BMC Medical Education, 16*(40), 1-11. https://doi.org/ 10.1186/s12909-016-0570-z

Edmonds, L. A., Mammino, K., & Ojeda, J. (2014). Effect of verb network strengthening treatment (VNeST) in persons with aphasia: extension and replication of previous findings. *American Journal of Speech-Language Pathology, 23*(2), S312-S329. https://doi.org/10.1044/2014_AJSLP-13-0098

Evdarsson, J. D., Sandman, P., & Rasmussen, B. H. (2003). Meanings of giving touch in the care of older patients: becoming a valuable person and professional. *Journal of Clinical Nursing, 12*(4), 601-609. https://doi.org/10.1046/j.1365-2702.2003.00754.x

Finch, E., Fleming, J., Brown, K., Lethlean, J., Cameron, A., & McPhail, S. M. (2013). The confidence of speech-language pathology students regarding communicating with people with aphasia. *BMC Medical Education, 13*, 92. https://doi.org/10.1186/1472-6920-13-92

Finch, J. (2015). 'Running with the fox and hunting with the hounds': social work tutors' experiences of managing failing social work students in practice learning settings. *British Journal of Social Work, 45,* 2124-2151. https://doi.org/10.1093/BJSW/BCU085

Fleming, J., & Pretti, T. J. (2019). The impact of work-integrated learning students on workplace dynamics. *The Journal of Hospitality. Leisure, Sport and Tourism Education, 25*. https://doi.org/10.1016/j.jhldte.2019.100209

Forbes, D. R., & Nolan, D. (2018). Factors associated with patient-satisfaction in student-led physiotherapy clinics: a qualitative study. *Physiotherapy Theory and Practice, 34*(9), 705-713. https://doi.org/10.1080/09593985.2018.1423592

Gascoigne, M., & Parker, A. (2001). All placements great and small: an analysis of clinical placement offers made by SLT services. *International Journal of Language & Communication Disorders, 36*, 144-149. https://doi.org/10.3109/13682820109177874

Geller, E., & Foley, G. (2009). Broadening the "ports of entry" for speech-language pathologists: a relational and reflective model for clinical supervision. *American*

Journal of Speech-Language Pathology, 18(1)*,* 22-41. https://doi.org/10.1044/1058-0360(2008/07-0053)

Gillett-Swan, J., & Grant-Smith, D. (2018). A framework for managing the impacts of work-integrated learning on student quality of life. *International Journal of Work-Integrated Learning, 19*(2), 129-140.

Godecke, E., Armstrong, E., Rai, T., Ciccone, N., Rose, M. L., Middleton, S., Witworth, A., Holland, A., Ellergy, F., Hankey, G. J., Cadilhac, D. A., & Bernhardt, J. (2020). A randomised control trial of intensive aphasia therapy after acute stroke: the Very Early Rehabilitation for SpEech (VERSE) study. *International Journal of Stroke, 0*(0), 1-17. https://doi.org/10.1177/1747493020961926

Groves, M., Mitchell, M., Henderson, A., Jeffrey, C., Kelly, M., & Nulty, D. (2015). Critical factors about feedback: 'they told me what I did wrong; but didn't give me any feedback'. *Journal of Clinical Nursing, 24*(11-12)*,* 1737-1739. https://doi.org/10.1111/jocn.12765

Gunning, D., Wenke, R., Ward, E. C., Chalk, S., Lawrie, M., Romano, M., Edwards, A., Hobson, T., & Cardell, E. (2017). Clinicians' perceptions of delivering new models of high intensity aphasia treatment. *Aphasiology, 31*(4), 406-426. https://doi.org/10.1080/02687038.2016.1236359

Harvey, S., Carragher, M., Walsh Dickey, M., Pierce, J. E., & Rose, M. L. (2020). Dose effects in behavioural treatment of post-stroke aphasia: a systematic. review and

meta-analysis. *Disability and Rehabilitation*. https://doi.org/01.1080/09638288.2020.1843079

Health Practitioners Competence Assurance Act 2003. https://www.legislation.govt.nz/act/public/2003/0048/latest/DLM203312.html

Heaslip, V., & Scammell, J. (2012). Failing underperforming students: the role of grading in practice assessments. *Nurse Education in Practice, 12*(2)*,* 95-100. https://doi.org/10.1016/j.nepr.2011.08.003

Hebert, D., Lindsay, M. P., McIntyre, A., Kirton, A., Rumney, P. G., Bagg, S., Bayley, M., Dowlatshahi, D., Dukelow, S., Garnhum, M., Glasser, E. Halabi, M., Kang, E., MacKay-Lyons, M., Martino, R., Rochette, A., Rowe, S., Salbach, N., Semenko, B., . . . Teasell, R. (2016). Canadian stroke best practice recommendations: Stroke rehabilitation practice guidelines, update 2015. *International Journal of Stroke, 11*(4), 469-484. https://doi.org/10.1177/1747493016643553

Hermann, D., & Chopp, M. (2012). Promoting brain remodeling and plasticity for stroke recovery: therapeutic promise and potential pitfalls of clinical translation. *Lancet Neurology, 11*(4), 369-380. https://doi.org/10.1016/S1474-4422(12)70039-X

Herrington, T., & Herrington, J. (Eds.) (2006). *Authentic learning environments.* Information Science Publishing.

Hill, A. E., Davidson, B., & Theodoros, D. (2013). Speech-language pathology students' perceptions of a standardised patient clinic. *Journal of Allied Health, 42*(2), 84-91.

Hill, A. E., Ward, E., Heard, R., McAllister, S., McCabe, P., Penman, A., Caird, E., Aldridge, D., Baldac, S., Cardell, E., Davenport, R., Davidson, B., Hewat, S., Howells, S., Purcell, A., & Walters, J. (2021). Simulation can replace part of speech-language pathology placement time: A randomised controlled trial. *International Journal of Speech Language Pathology, 23*(1), 92-102. https://doi.org/10.1080/17549507.2020.1722238

Ho, D. W. L., & Whitehill, T. (2009). Clinical supervision of speech-language pathology students: Comparison of two models of feedback. *International Journal of Speech Language Pathology, 11*(3), 244-255. https://doi.org/10.1080/17549500902795468

Holland, K. (1997). Does taking students increase your waiting lists. *Physiotherapy, 83*(4), 166-172. https://doi.org/10.1016/S0031-9406(05)66073-7

Hughes, R., & Desbrow, B. (2010). An evaluation of clinical dietetic student placement case-mix exposure, service delivery and supervisory burden. *Nutrition and Dietetics, 67*(4), 294-301. https://doi.org/10.1111/j.1747-0080.2010.01478.x

Janssen, J., Klassen, T., Connell, L., & Eng, K. (2020). Factors influencing the delivery of intensive rehabilitation in stroke: patient perceptions versus rehabilitation therapist perceptions. *Physical Therapy, 100*(2), 307-316. https://doi.org/10.1093/ptj/pzz159

Jesse, M. A. (2016). Influences of sociocultural factors within the clinical learning environment on students' perceptions of learning: an integrative review. *Journal of Professional Nursing, 32*(6)*,* 463-486. https://doi.org/10.1016/j.profnurs.2016.03.006

Johansson, M. B., Carlsson, M., & Sonnander, K. (2012). Communication difficulties and the use of communication strategies: from the perspective of individuals with aphasia. *International Journal of Language & Communication Disorders, 47*(2)*,* 144-155. https://doi.org/10.1111/j.1460-6984.2011.00089.x

Jones, D., McAllister, L., & Lyle, D. (2015). Stepping out of the shadows: allied health student and academic perceptions of the impact of a service-learning experience on students' work-readiness and employability. *Journal of Teaching and Learning for Graduate Employability, 6*(1), 66-87. https://doi.org/10.21153/jtlge2015vol6no1art574

Joshi, P. D., Almeida, M., & Shete, P. D. (2010). Attitudes toward physical contact in a therapeutic setting: role of gender and expertise. *Journal of the Indian Academy of Applied Psychology, 36*(1), 35-43.

Kagan, A. (1995) Revealing the competence of aphasic adults through conversation: a challenge to health professionals. *Topics in Stroke Rehabilitation, 2*(1), 15-28.

Katz, R., Hallowell, B., Code, C., Armstrong, E., Roberts, P., Pound, C., & Katz, L. (2000). A multi-national comparison of aphasia management practices. *International Journal*

of Language & Communication Disorders, 35(2)*,* 303-314. https://doi.org/10.1080/136828200247205

Kanno, H., & Koeske, G. F. (2010). Medical social worker students' satisfaction with their field placements: the role of preparedness and supervision quality. *Journal of Social Work Education, 46*(1)*,* 23-28. https://doi.org/10.5175/JSWE.2010.200800066

Kayes, N. M., Mudge, S., Bright, F. A. S., & McPherson, K. (2015). Whose behaviour matters? Rethinking practitioner behaviour and its influence on rehabilitation outcomes. In K. McPherson, B. E. Gibson, & A. Leplege (Eds.), *Rethinking Rehabilitation* (pp. 249-271). CRC Press.

Kersner, M., & Parker, A. (2001). A strategic approach to clinical placement learning. *International Journal of Language and Communication Disorders, 36*(S1), 150-155. https://doi.org/10.3109/13682820109177875

Kolb, D. (1984). *Experiential Learning: Experience as the source of learning and development.* Englewood-Cliffs: Prentice-Hall.

Kolb, A. Y., & Kolb, D. A. (2009). The learning way: metacognitive aspects of experiential learning. *Simulation & Gaming, 40*(3), 297-327. https://doi.org/10.1177/1046878108325713

Kurland, J., Baldwin, K., & Tauer, C. (2010). Treatment-induced neuroplasticity following intensive naming therapy in a case of chronic Wernicke's aphasia. *Aphasiology, 24*(6-8), 737-751. https://doi.org/10.1080/02687030903524711

Ladyshewsky, R. (1995). Enhancing service productivity in acute care inpatient settings using a collaborative clinical education model. *Physical Therapy, 75*(6), 503-10. https://doi.org/10.1093/ptj/75.6.503

Ladyshewsky, R., Barrie, S., & Drake, V. (1998). A comparison of productivity and learning outcome in individual and cooperative physical therapy clinical education models. *Physical Therapy, 78*(12), 1288-1298. https://doi.org/10.1093/ptj/78.12.1288

Lawrence, D., Bryant, T. K., Nobel, T. B., Dolansky, M. A., & Singh, M. K. (2015). A comparative evaluation of patient satisfaction outcomes in an interprofessional student-run free clinic. *Journal of Interprofessional Care, 29*(5), 445-450. https://doi.org/10.3109/13561820.2015.1010718

Lawton, M., Haddock, G., Conroy, P., Serrant, L., & Sage, K. (2018). People with aphasia's perception of the therapeutic alliance in aphasia rehabilitation post-stroke: a thematic analysis. *Aphasiology, 31*(12), 1321-1397. https://doi.org/10.1080/02687038.2018.1441365

Lawton, M., Sage, K., Haddock, G., Conroy, P., & Serrant, L. (2018). Speech and language therapists' perspectives of therapeutic alliance construction and maintenance in

aphasia rehabilitation post-stroke. *International Journal of Language & Communication Disorders, 53*(3), 550-563. https://doi.org/10.1111/1460-6984.12368

Lawton, M., Haddock, G., Conroy, P., Serrant, L., & Sage, K. (2020). People with aphasia's perspectives of the therapeutic alliance during speech-language intervention: a Q methodological approach. *International Journal of Speech Language Pathology, 22*(1), 59-69. https://doi.org/10.1080/17549507.2019.1585949

Lee, A. (2008). How are doctoral students supervised? Concepts of doctoral research supervision. *Studies of Higher Education, 33*(3)*,* 267-281. https://doi.org/10.1080/03075070802049202

Lee, C., & Schmaman, F. (1987). Self-efficacy as a predictor of clinical skills among speech pathology students. *Higher Education, 16*(4), 407-416. https://www.jstor.org/stable/3446910

Lincoln, M., Adamson, B., & Covic, T. (2004). Perceptions of stress, time management and coping strategies of speech pathology students on clinical placement. *Advances in Speech-Language Pathology, 6*(2), 91-11. https://doi.org/10.1080/14417040410001708512

Luck, A. M., & Rose, M. L. (2007). Interviewing people with aphasia: insights into method adjustments from a pilot study. *Aphasiology, 21*(2)*,* 208-224. https://doi.org/10.1080/0268703061065470

Madden, M. L., Oelschlaeger, M. L., & Damico, J. S. (2002). The conversational value of laughter for a person with aphasia. *Aphasiology, 16*(12)*,* 1199-1212. https://doi.org/10.1080/02687030244000437

Madill, A., Jordan, A., & Shirley, C. (2000). Objectivity and reliability in qualitative analysis: Realist, contextualised and radical constructionist epistemologies. *British Journal of Psychology, 91,* 1-20.https://doi.org/10.13448/000712600161646

McAllister, L. (2005). Issues and Innovations in Clinical Education. *Advances in Speech Language Pathology, 7*(3), 138-148. https://doi.org/10.1080/14417040500181239

McAllister, S., Lincoln, M., Ferguson, A., & McAllister, L. (2006). *COMPASS® : Competency assessment in speech pathology.* Melbourne: Speech Pathology Australia.

McAllister, S., Lincoln, M., Ferguson, A., & McAllister, L. (2011). A systematic program of research regarding the assessment of speech-language pathology competencies. *International Journal of Speech-Language Pathology, 13*(6), 469-479. https://doi.org/10.3109/17549507.2011.580782

McAllister, S., & Nagarajan, S. (2015). Accreditation requirements in allied health education: strengths, weaknesses, and missed opportunities. *Journal of Teaching and Learning for Graduate Employability, 6*(1)*,* 2-23. https://doi.org/10.21153/jtlge2015vol6no1art570

Mammarella, N., Fairfield, B., & Domenico, A. D. (2010). When touch matters: an affective tactile intervention for older adults. *Geriatrics Gerontology International, 12,* 722-723. https://doi.org/10.1111/j.1447-0594.2012.00836.x

Meinzer, M., Djundja, D., Barthel, G., Elbert, T., & Rockstroh, B. (2005). Long-term stability of improved language functions in chronic aphasia after constraint-induced language therapy. *Stroke, 36*(7), 1462-1466. https://doi.org/ 10.1161/01.STR.0000169941.29831.2a

Meinzer, M., Elbert, T., Wienbruch, C., Djundjia, D., Barthel, G., & Rockstroh, B. (2004). Intensive language training enhances brain plasticity in chronic aphasia. *BMC Biology, 2*(20). https://doi.org/ 10.1186/1741-7007-2-20

Ministry of Health. (2020). *About the alert levels* [Fact sheet]. New Zealand Government. https://covid19.govt.nz/alert-system/about-the-alert-system/

Morris, D., Henegar, J., Khanin, S., Oberle, S., & Thacker, S. (2014). Analysis of touch used by occupational therapy practitioners in skilled nursing facilities. *Occupational Therapy International, 21*(3), 133-142. https://doi.org/10.1002/oti.1374

Nash, R. A., & Winstone, N. E. (2017), Responsibility-sharing in the giving and receiving of assessment feedback. *Frontiers in Psychology, 8*, 1519. https://doi.org/10.3389/fpsyg.2017.01519

National Clinical Guideline Centre. (2013). *Stroke Rehabilitation. Long Term Rehabilitation After Stroke. Clinical Guideline 162.* UK: National Clinical Guideline Centre.

Neden, J., Townsend, R., & Zuchowski, I. (2018). Towards sustainability in Australian social work field education. *Australian Social Work, 71*(3), 345-357. https://doi.org/10.1080/0312407X.2018.1465576

New Zealand Qualifications Authority (NZQA). (2003). *The New Zealand Qualifications Framework.* Wellington: New Zealand Government. https://www.nzqa.govt.nz/assets/Studying-in-NZ/New-Zealand-Qualification-Framework/requirements-nzqf.pdf

Nicole, M., Fairbrother, M., Nagarajan, S. V., Blackford, J., & McAllister, L. (2014). Student-led clinics: building placement capacity and filling service gaps. *Work Integrated Learning: Building Capacity* (pp. 32-37). NSW: Australian Collaborative Education Network Ltd.

Nottingham, S., & Henning, J. (2014). Feedback in clinical education, part I: Characteristics of feedback provided by approved clinical instructors. *Journal of Athletic Training, 49*(1), 49-57. https://doi.org/10.4085/1062-6050-48.6.14

NZ National Stroke Network. (2017, April). *Minimum Ministry of Health Expectations to Meet Designation of 'Community Stroke Rehabilitation Service'.* New Zealand: National Stroke Network. https://cdn-flightdec.userfirst.co.nz/uploads/sites/strokenetwork/files/acutecom_ehabilitation/Co

mmunity_Stroke_Rehabilitation_service_minimal_stadards_for_MOH_170412v2.docx

NZSTA. (2018a, September 13). *NZSTA Constitution 2018.* New Zealand: NZSTA.

NZSTA. (2018b). *NZSTA Programme Accreditation Framework 2011, Amended 2018.* New Zealand: NZSTA.

Obermeyer, J. A., Rogalski, Y., & Edmonds, L. A. (2021). Attentive reading with constrained summarization-written, a multi-modality discourse-level treatment for mild aphasia. *Aphasiology, 35*(2), 100-125, https://doi.org/10.1080/02687038.2019.1686743

O'Brien, A. T., McNeil, K., & Dawson, A. (2019). The student experience of clinical supervision across health disciplines – perspectives and remedies to enhance clinical placement. *Nurse Education in Practice, 34,* 48-55. https://doi.org/10.1016/j.nepr.2018.11.006

Oliver, S., & Redfern, S. J. (1991). Interpersonal communication between nurses and elderly patients: refinement of an observation schedule. *Journal of Advanced Nursing, 16*(1)*,* 30-38. https://doi.org/10.1111/j.1365-2648.1991.tb01494.x

Orioles, A., Miller, V. A., Kersun, L., Ingram, M., & Morrison, W. E. (2013). To be a phenomenal doctor you have to be the whole package: physicians' interpersonal

behaviors during difficulty conversations in pediatrics. Journal of Palliative Medicine, 16(8), 929-933. https://doi.org/10.1089/jpm.2013.0103

Parker, A., & Emanuel, R. (2001). Active learning in service delivery: an approach to initial clinical placements. *International Journal of Language and Communication Disorders, 36 Suppl*, 162-166. https://doi.org/10.3109/13682820109177877

Pasupathy, R., & Bogschutz, R. J. (2013). An investigation of graduate speech-language pathology students' SLP clinical self-efficacy. *Contemporary Issues in Communication Science and Disorders, 40,* 151-159. https://doi.org/1092-5171/13/4002-0151

Peiris, C. L., Taylor, N. F., & Shields, N. (2012). Patients value patient-therapy interactions more than the amount or content of therapy during inpatient rehabilitation: a qualitative study. *Journal of Physiotherapy, 58*(4)*,* 261-268. https://doi.org/10.1016/S1836-9553(12)70128-5

Pierce, J. E., O'Halloran, R., Menahemi-Falkova, M., Togher, L., & Rose, M. L. (2020). Comparing higher and lower weekly treatment intensity for chronic aphasia: a systematic review and meta-analysis. *Neuropsychological Rehabilitation*. https://doi.org/10.1080/09602011.2020.1768127

Pinnock, R., Anakin, M., & Jouart, M. (2019). Clinical reasoning as a threshold skill. *Medical Teacher, 41(6);* 683-689.https://doi.org/10.1080/0142159X.2019.1569754

Platz, T. (2019). Evidence-based guidelines and clinical pathways in stroke rehabilitation - an international perspective. *Frontiers in Neurology, 10*, 200. https://doi.org/10.3389/fneur.2019.00200

Pulvermuller, F., & Berthier, M. L. (2008). Aphasia therapy on a neuroscience basis. *Aphasiology, 22*(6), 563-599. https://doi.org/10.1080/02687030701612213

Quail, M., Brundage, S. B., Spitalnick, J., Allen, P. J., & Beilby, J. (2016). Student self-reported communication skills, knowledge and confidence across standardised patient, virtual and traditional clinical learning environments. *BMC Medical Education, 16*(73), 1-12. https://doi.org/10.1186/s12909-016-0577-5

Quigly, D., Loftus, L., McGuire, A.., & O'Grady, K. (2020). An optimal environment for placement learning: listening to the voices of speech and language therapy students. *International Journal of Language & Communication Disorders, 55*(4), 506-519. https://doi.org/10.1111/1460-6984.12533

Rindflesh, A., Hoversten, K., Patterson, B., Thomas, L., & Dunfee, H. (2013). Students' descriptions of factors contributing to a meaningful clinical experience in entry-level physical therapist professional education. *Work, 44*(3)*,* 265-274. https://doi.org/10.3233/WOR-121503.

Rodger, S., Martin, E., Clark, M., Ash, S., & Graves, N. (2011). Occupational therapy students' contribution to occasions of service during practice placements in health

settings. *Australian Occupational Therapy Journal, 58*(6), 412-418. https://doi.org/10.1111/j.1440-1630.2011.00971.x

Rodger, S., Webb, G., Devitt, L., Gilbert, J., Wrightson, P., & McMeeken, J. (2008). Clinical Education and Practice Placements in the Allied Health Professions: An International Perspective. *Journal of Allied Health, 37*(1), 53-62.

Rose, M. L., Ferguson, A., Power, E., Togher, L., & Worrall, L. E. (2013). Aphasia rehabilitation in Australia: current practices, challenges and future directions. *International Journal of Speech-Language Pathology, 16*(2), 1-12. https://doi.org/10.3109/17549507.2013.794474

Roth, F. P., & Worthington, C. K. (2019). *Treatment Resource Manual for Speech-Language Pathology, Sixth Edition.* ProQuest Ebook Central: Plural Publishing.

Royal College of Speech Language Therapists. (2021, February). *Practice-based learning: main guide.* https://www.rcslt.org/members/lifelong-learning/practice-based-learning/practice-based-learning-guidance/

Rudolf., S., Manning, W. H., & Sewell, W. R. (1983). The use of self-efficacy scaling in training student clinicians: Implications for work with stutterers. *Journal of Fluency Disorders 8,* 55-75. https://doi.org/10.1016/0094-730X(83)90021-9

Sewell, J. L., Maggio, L. A., ten Cate, O., van Gog, T., Young, J. Q., & O'Sullivan, P. S. (2019). Cognitive load theory for training health professionals in the workplace: A

BEME review of studies among diverse professions: BEME guide no. 53. *Medical Teacher, 41*(3), 256-270. https://doi.org/10.1080/0142159X.2018.1505034

Sheepway, L., Lincoln, M., & McAllister, S. (2014). Impact of placement type on the development of clinical competency in speech-language pathology students. *International Journal of Language & Communications Disorders, 49*(2), 189-203. https://doi.org/10.1111/1460-6984.12059

Sheepway, L., Lincoln, M., & Togher, L. (2011). An international study of clinical education practices in speech-language pathology. *International Journal of Speech-Language Pathology, 13*(2), 174-185. https://doi.org/10.3109/17549507.2011.491129

Sherratt, S., & Hersh, D. (2010). "You feel like family..." professional boundaries and social model aphasia groups. *International Journal of Speech-Language Pathology, 12*(2), 152-161. https://doi.org/10.3109/17549500903521806

Sherratt, S., & Simmons-Mackie, N. (2016). Shared humour in aphasia groups: “they should be called “cheer groups”. *Aphasiology, 30*(9), 1039-1057. https://doi.org/10.1080/02687038.2015.1092495

Smedley, A., & Morey, P. (2010). Improving learning in the clinical nursing environment: perceptions of senior Australian bachelor or nursing students. *Journal of Research in Nursing, 15*(1), 75-88. https://doi.org/10.1177/1744987108101756

Shrubsole, K., Worrall, L., Power, E., & O'Connor, D. (2018). Barriers and facilitator to meeting aphasia guideline recommendations: what factors influence speech pathologists' practice? *Disability and Rehabilitation, 41*(13), 1-12. https://doi.org/10.1080/09638288.2018.1432706

Sokkar, C., & McAllister, L. (2015). Diversifying student placements: understanding barriers to and benefits of placements in speech pathology private practice. *Journal of Clinical Practice in Speech Language Pathology, 17*(1), 37-44.

Sokkar, C., Penman, M., Raymond, J., & McAllister, L. (2019). An evaluation of client satisfaction with student-delivered speech-language pathology services in private practice. *Journal of Clinical Practice in Speech-Language Pathology, 21*(2), 65-69.

Speech Pathology Association of Australia. (2001). *Competency based occupational standards for speech pathologists - entry level (revised).* Melbourne: Speech Pathology Association of Australia.

Speech Pathology Australia. (2005). *Position Statement: Clinical Education - the Importance and Value for the Speech Pathology Profession.* Retrieved from Speech Pathology Australia: http://www.speechpathologyaustralia.org.au/library/position_statements/Clinical_Education.pft

Speech Pathology Australia (2018). *Clinical Education in Australia: Building a profession for the future: A national report for the speech pathology profession.* The Speech Pathology Association of Australia.

Stahl, B., Mohr, B., Buscher, V., Dreyer, F. R., Lucchese, G., & Pulvermuller, F. (2018). Efficacy of intensive aphasia therapy in patients with chronic stroke: a randomised controlled trial. *Cognitive Neurology*, 586-592. https://doi.org/10.1136/jnnp-2017-315962

Stroke Foundation. (2020). *Clinical Guidelines for Stroke Management.* Melbourne: Stroke Foundation.

Stroke Foundation of NZ & NZ Clinical Guidelines Group. (2010). *New Zealand Clinical Guidelines for Stroke Management 2010.* Ministry of Health. https://www.health.govt.nz/system/files/documents/publications/nzclinicalguidelinesstrokemanagement2010activecontents.pdf

Sweller, J. (1988). Cognitive load during problem solving: effects on learning. *Cognitive Science, 12*(2), 257-85. https://doi.org/10.1207/s15516709cog1202_4

Sweller, J. (2011). Cognitive load theory. In J. P. Mestre and B. H. Ross (Eds.), *Psychology of Learning and Motivation: Vol 55. Cognition in Education* (pp37-76). Elsevier Academic Press. https://doi.org/10.1016/B978-0-12-387691-1.00002-8

Syder, D. (1996). The use of simulated clients to develop clinical skills of speech and language therapy students. *European Journal of Disorders of Communication, 31,*(2): 181-192.

Tillard, G. D., Cook, K., Gerhard, D., Keast, L., & McAuliffe, M. (2018). Speech-language pathology student participation in verbal reflective practice groups: perceptions of development, value and group condition differences. *Teaching and Learning in Communication Sciences & Disorders, 2*(2). https://doi.org/10.30707/TLCSD2.2Tillard

Trebilcock, M., Worrall, L., Ryan, B., Shrubsole, K., Jagoe, C., Simmons-Mackie, N., Bright, F., Cruice, M., Pritchard, M., & Le Dorze, G. (2019). Increasing the intensity and comprehensiveness of aphasia services: identification of key factors influencing implementation across six countries. *Aphasiology, 33*(7), 865-887. https://doi.org/10.1080/02687038.2019.1602860

Trexler Hessen, M. (2020, January 27). *Expert guidance and commentary: key facts for clinicians*. Novel Coronavirus Information Centre. https://web.archive.org/web/20200130171622/https://www.elsevier.com/connect/coronavirus-information-center

van Merrienboer, J. J. G., & Sweller, J. (2010). Cognitive load theory in health professional education: design principles and strategies. *Medical Education, 44,* 85-93. https://doi.org/10.1111/j.1365-2923.2009.03498.x

Verna, A., Davidson, B., & Rose, T. (2009). Speech-language pathology services for people with aphasia: a survey of current practice in Australia. *International Journal of Speech-Language Pathology, 11*(3), 191-205. https://doi.org/10.1080/17549500902726059

Veselka, L., Schermer, J. A., Martin, R. A., & Vernon, P. A. (2010). Laughter and resiliency: A behavioral genetic study of humor styles and mental toughness. *Twin Research and Human Genetics, 13,* 442-449. https://doi.org/10.1375/twin13.5.442

Walsh-Mooney, H. A. (2009). *The value of rapport in rangatahi Maori mental health: a Maori social work perspective* (Master's thesis, Massey University, Palmerston North, New Zealand). Retrieved from https://mro.massey.ac.nz/bitstream/handle/10179/1363/02_whole.pdf

Walsh, I. P., & Duchan, J. F. (2011). Product and process depictions of rapport between clients and their speech-language pathologists during clinical interactions. In R. J. Fourie (ed.), *Therapeutic Process for Communication Disorders: A Guide for Students and Clinicians*. Psychology Press.

Wambaugh, J. L., Wright, S., Boss, E., Mauszycki, S. C., DeLong, C., Hula, W., & Doyle, P. J. (2018). Effects of treatment intensity of outcomes in acquired apraxia of speech. *American Journal of Speech-Language Pathology, 27*(1S), 306-322. https://doi.org/10.1044/2017_AJSLP-16-0188

Wambaugh, J. L., Wright, S., Nessler, C., Mauszycki, S. C., Bunker, L., Boss, E., Zhang, Y., Hula, W. D., & Doyle, P. J. (2020). Further study of the effects of treatment intensity on outcomes for sound production treatment for acquired apraxia of speech: does dose frequency matter? *American Journal of Speech-Language Pathology, 29*(1), 263-285. https://doi.org/10.1044/2019_AJSLP-19-00005

Wertz, R. T., Weiss, D. G., Aten, J. L., Brookshire, R. H., Garcia-Bunuel, L., Holland, A. L., Kurtzke, J. F., LaPointe, L. L., Milianti, F. J., Brannegan, R., Greenbaum, H., Marshall, R. C., Vogel, D., Carter, J., Barnes, N. S., & Goodman, R. (1986). Comparison of clinic, home, and deferred language treatment for aphasia: a veterans administration cooperative study. *Archives of Neurology, 43*(7), 653-658. https://doi.org/10.1001/archneur.1986.00520070011008

Westerveld, M. F., & Garvis, S. (2014). Speech pathology students' perceptions of workplace-based volunteer placements in a school setting. *Journal of Teaching and Learning for Graduate Employability, 5*(1), 2-11. https://doi.org/10.21153/jtlge2014vol5no1art564

Wilson, C., & Kim, E. S. (2019). Qualitative data collection: considerations for people with aphasia. *Aphasiology*. https://doi.org./10.1080/02687038.2019.1693027

Winstein, C. J, Stein, J., Arena, R., Bates, B., Cherney, L. R., Cramer, S. C. Deruyter, F., Eng, J. J., Fisher, B., Harvey, R. L., Lang, C. E., MacKay-Lyons, M., Ottenbacher, K. J., Pugh, S., Reeves, M.J., Richards, L. G., Stiers, W., Zorowitz, R. D., America Heart Association Stroke Council, … Council on Quality of Care and Outcomes Research

(2016). Guidelines for adult stroke rehabilitation and recovery: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke, 47*(6), e98-169. https://doi.org/10.1161/STR.0000000000000098

Wolford, G. W., Wolford, L. W., Fissel Brannick, S., Scott, M., & Smith, R. (2020). "Shouldn't you be collaborative by now?": supervisory needs, expectations, and satisfaction across the educational trajectory in speech-language pathology. *The Clinical Supervisor.* https://doi.org/10.1080/07325223.2020.1833268

Worrall, L., Davidson, B., Hersh, D., Ferguson, A., Howe, T., & Sherratt, S. (2010). The evidence for relationship-centred practice in aphasia rehabilitation. *Journal of Interactional Research in Communication Disorders, 1*(2)*,* 277-300. https://doi.org/10.1558/jircd.v1i2.277

Worrall., L., Sherratt., S., Rogers., P., Howe, T., Hersh, D., Ferguson, A., & Davidson, B. (2011). What people with aphasia want: their goals according to the ICF. *Aphasiology, 25*(3), 309-322. https://doi.org/10.1080/02687038.2010.508530

World Health Organisation. (2020). *Coronavirus Situation Report*. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200311-sitrep-51-covid-19.pdf

Wright, K., Robinson, A., Kolbe, A., Wilding, C., & Davidson, W. (2013). *Untapped capacity for clinical placements in the Riverina ICTN: does it exist, where is it? And can it be used.* NSW: Centre for Inland Health, Charles Sturt University.

Yeo, J., Zhou, L., & Ratnasabapathy, Y. (2016). Stroke care delivery of North Shore Hospital, Waitemata District Health Board 2014. *New Zealand Medical Journal, 129*(1431), 67-79.

Appendices

Appendix 1: UC Human Ethics Committee Approval Letter

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

HUMAN ETHICS COMMITTEE
Secretary, Rebecca Robinson
Telephone: +64 03 369 4588, Extn 94588
Email: human-ethics@canterbury.ac.nz

Ref: HEC 2019/98

20 August 2019

Nicola Henderson
Psychology, Speech and Hearing
UNIVERSITY OF CANTERBURY

Dear Nicola

The Human Ethics Committee advises that your research proposal "Effects of Intensive Treatment Provision on the Development of SLT Students' Clinical Competence" has been considered and approved.

Please note that this approval is subject to the incorporation of the amendments you have provided in your email of 16th August 2019.

Best wishes for your project.

Yours sincerely

Dr Lindsey MacDonald
Acting Chair
University of Canterbury Human Ethics Committee

Appendix 2: Signed Permission from Service Manager of the Community Service

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

Nicola Henderson
School of Psychology, Speech and Hearing
Telephone: +64 33694414
Email: nikki.henderson@pg.canterbury.ac.nz
07.05.2019
HEC Ref: 2019/98

Effects of Intensive Treatment Provision on the Development of SLP Students

Consent Form for Services

I have reviewed the Information for Services sheet and been given the opportunity to ask questions.

I understand that:

- Student placement is usual care
- Client service is usual care
- Clients and students will opt in/out
- No client data will be accessed

I would/would not (please circle) like to receive a copy of the project results.

I hereby grant permission for supervising speech-language therapists to provide clients with information about the research project.

Signature: _____

Name & Role: Bronwyn Suzana Clinical Manager ACTS & CSRS

Date: 30/08/2019

Appendix 3: Student Information Sheet and Consent Form

Nicola Henderson
School of Psychology, Speech and Hearing
Telephone: +6433694414
Email: nikki.henderson@pg.canterbury.ac.nz
07.05.2019
HEC Ref: 2019/98

Effects of Intensive Treatment Provision on the Development of SLP Students

Information Sheet for Students

Kia Ora,

My name is Nicola Henderson, a speech-language therapist with the Canterbury District Health Board and post-graduate student at the University of Canterbury. I am investigating whether involvement in intensive therapy programmes has a comparable effect on the way speech-language pathology students develop their clinical skills during block placements.

You have been approached to take part in this study because you are enrolled in the Bachelor of Speech Language Pathology, and will be completing a clinical block placement as part of your studies. I have located your contact details through the Director of Clinical Education of the BSLP programme.

If you choose to take part in the study, your involvement in this project will involve the following:

- Completing your block placement in a service which typically involves students in intensive treatment, as per normal practice.
- Completing a questionnaire at the beginning of the placement, and again at the end of the placement (expected time to complete: 30 minutes).
- Approximately 20% (or one a week) of your feedback sessions with your supervisor will be audio-recorded. These recordings will be de-identified and reviewed by an independent moderator to ensure you are receiving supervision that is meeting the needs of your learning goals.
- Completing the COMPASS® assessment at the middle and end of the placement, as per normal practice.
- Allowing the research team to review your COMPASS® data for your current block placement (CMDS484) and your last placement (CMDS482 – no extra time required as this is part of your usual time requirements for your clinical course).

In the performance of the tasks listed above there is no relationship or risk to your clinical grade if you choose to participate or do not choose to participate. To demonstrate this, I will not have access to the questionnaire you complete or COMPASS® data until after the University of Canterbury has

Nicola Henderson

Appendix 4: Pre-Placement Confidence-Competency Questionnaire

Student Clinical Confidence Survey [Pre-Placement]

Start of Block: Introduction

Intro Kia Ora,

I am interested in researching development of students' confidence and competence during block placements.

Information on the Project

Our first step is to survey how confident and competent students feel before beginning their block placement. At the completion of the placement, you will be sent a link to repeat the questionnaire to review how this may have changed.

This study is voluntary. It will take up to 10 minutes to complete.

Participation in this study has no impact on your clinical grades. It is not a clinical requirement to participate in this study. The anonymous results of the questionnaire will be reviewed following the submission of your final COMPASS assessment. This highlights there is no relationship between participating in this study and your COMPASS results.

If you have any questions about the study, please contact

nikki.henderson@pg.canterburyac.nz. If you have a complaint at the study, you may contact the Chair, Human Ethics Committee, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

This project has been reviewed and approved by the Human Ethics Committee, University of Canterbury.

Consent By choosing "I consent to participating in this study" you are giving your consent to participate and can now complete the questionnaire. By choosing "I do not consent to participating in the study" - you are not giving your consent and should not complete the questionnaire. If you change your mind midway through - please exit the questionnaire. Incomplete responses will be not counted as consenting participants. We thank you considering to participate in this project. Nikki Henderson, Gina Tillard, Kate Cook, Dean Sutherland

- ○ I consent to participating in the study (1)
- ○ I do not consent to participating in the study (2)

End of Block: Introduction

Start of Block: Block 1

Q1 Please indicate on the following scale how anxious you feeling about interacting with clients in general in clinical practice.

- ○ Not Anxious (1)
- ○ Slightly Anxious (2)
- ○ Moderately Anxious (3)
- ○ Very Anxious (4)
- ○ Extremely Anxious (5)

Q2 To what extent do you agree with the following statements in regards to interacting with clients?

I feel confident in my ability to establish rapport with a client

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q3 I feel confident in any ability to explain my professional role to clients

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q4 I feel confident in my ability to use interpersonal skills such as reflective listening and appropriate use of questions

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q5 I feel confident in my ability to identify key clinical information

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q6 I feel confident in my ability to interview clients about personal information

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q7 I feel confident in my ability to provide information to clients

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q8 I feel confident in my ability to engage with clients with challenging behaviours

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q9 I feel confident in my ability to interact in a professional manner

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q10 Please indicate on the scale how anxious you feel about working with an intensive client (a client you will see more than twice a week)

- ○ Not Anxious (1)
- ○ Slightly Anxious (2)
- ○ Moderately Anxious (3)
- ○ Very Anxious (4)
- ○ Extremely Anxious (5)

End of Block: Block 1

Start of Block: Block 2

Appendix 5: Post-Placement Confidence-Competency Questionnaire

Student Clinical Confidence Survey [-Post-Placement]

Start of Block: Introduction

Intro Kia Ora,

I am interested in researching development of students' confidence and competence during block placements.

Information on the Project

Our first step is to survey how confident and competent students feel before beginning their block placement. At the completion of the placement, you will be sent a link to repeat the questionnaire to review how this may have changed.

This study is voluntary. It will take up to 10 minutes to complete.

Participation in this study has no impact on your clinical grades. It is not a clinical requirement to participate in this study. The anonymous results of the questionnaire will be reviewed following the submission of your final COMPASS assessment. This highlights there is no relationship between participating in this study and your COMPASS results.

If you have any questions about the study, please contact

nikki.henderson@pg.canterburyac.nz. If you have a complaint at the study, you may contact the Chair, Human Ethics Committee, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

This project has been reviewed and approved by the Human Ethics Committee, University of Canterbury.

Consent By choosing "I consent to participating in this study" you are giving your consent to participate and can now complete the questionnaire. By choosing "I do not consent to participating in the study" - you are not giving your consent and should not complete the questionnaire. If you change your mind midway through - please exit the questionnaire. Incomplete responses will be not counted as consenting participants. We thank you considering to participate in this project. Nikki Henderson, Gina Tillard, Kate Cook, Dean Sutherland

- ○ I consent to participating in the study (1)
- ○ I do not consent to participating in the study (2)

End of Block: Introduction

Start of Block: Block 1

Q1 Please indicate on the following scale how anxious you feeling about interacting with clients in general in clinical practice.

- ○ Not Anxious (1)
- ○ Slightly Anxious (2)
- ○ Moderately Anxious (3)
- ○ Very Anxious (4)
- ○ Extremely Anxious (5)

Q2 To what extent do you agree with the following statements in regards to interacting with clients?

I feel confident in my ability to establish rapport with a client

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q3 I feel confident in any ability to explain my professional role to clients

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q4 I feel confident in my ability to use interpersonal skills such as reflective listening and appropriate use of questions

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q5 I feel confident in my ability to identify key clinical information

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q6 I feel confident in my ability to interview clients about personal information

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q7 I feel confident in my ability to provide information to clients

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q8 I feel confident in my ability to engage with clients with challenging behaviours

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q9 I feel confident in my ability to interact in a professional manner

- ○ Strongly Disagree (1)
- ○ Disagree (2)
- ○ Neither Agree nor Disagree (3)
- ○ Agree (4)
- ○ Strongly Agree (5)

Q10 Please indicate on the scale how anxious you feel about working with an intensive client (a client you will see more than twice a week)

- ○ Not Anxious (1)
- ○ Slightly Anxious (2)
- ○ Moderately Anxious (3)
- ○ Very Anxious (4)
- ○ Extremely Anxious (5)

End of Block: Block 1

Start of Block: Post Placement Questions

Q11 Please indicate to what extent you agree/disagree with the following statements:

My clinical skills have improved as a result of interaction with intensive clients

- ○ Strongly Disagree (37)
- ○ Disagree (38)
- ○ Neither Agree nor Disagree (39)
- ○ Agree (40)
- ○ Strongly Agree (41)

Q12 My skills in providing appropriate information have improved as a result of my interaction with intensive clients

- ○ Strongly Disagree (4)
- ○ Disagree (5)
- ○ Neither Agree nor Disagree (6)
- ○ Agree (7)
- ○ Strongly Agree (8)

Q13 My confidence to interact with other clients in the future has increased as a result of my interactions with intensive clients

- ○ Strongly Disagree (4)
- ○ Disagree (5)
- ○ Neither Agree nor Disagree (6)
- ○ Agree (7)
- ○ Strongly Agree (8)

Q14a I learned a new skill as a result of interaction with intensive clients

- ○ Strongly Disagree (4)
- ○ Disagree (5)
- ○ Neither Agree nor Disagree (6)
- ○ Agree (7)
- ○ Strongly Agree (8)

Q14b If you indicated you have learned a new skill, please provide an example in the space below:

_____

Q15 Please indicate on the following scale how ANXIOUS you were overall during the interactions with intensive clients

- Not Anxious (38)
- Slightly Anxious (39)
- Moderately Anxious (40)
- Very Anxious (41)
- Extremely Anxious (42)

Q16 Please indicate on the following scale how USEFUL interacting with intensive clients was overall

- ○ Not useful (57)
- ○ Slightly useful (58)
- ○ Moderately useful (59)
- ○ Very useful (60)
- ○ Extremely useful (61)

Q17a In the future, do you think it would be useful to have more practice with intensive clients?

- ○ Yes (5)
- ○ No (6)

Q17b If you answered 'YES' please comment why:

_____

Q18 What changes would you make to improve the experience with intensive clients?

_____

Q19 Do you have any additional comments?

_____

End of Block: Post Placement Questions

Appendix 6: Awareness of Study Sheet for Clients and Families

School of Psychology, Speech and Hearing
Telephone: +64 27 213 8029
Email: nikki.henderson@pg.canterbury.ac.nz
07.05.2019
HEC Ref: 2019/98-1

Effects of Intensive Treatment Provision on the Development of SLP Students
Notice of Project

Kia Ora,

My name is Nicola Henderson, a speech-language therapist with the Canterbury District Health Board and post-graduate student at the University of Canterbury. I am investigating whether involvement in intensive therapy programmes has an effect on the way speech-language pathology (SLP) students develop their clinical skills during block placement. Part of this project involves interviewing the people and families the students are involved with, to get a different perspective.

You are getting this letter as you have consented to having SLP students involved in your care. At the end of your input with the student(s), you will get more information about the project and will be invited to participate, if you wish.

What happens now?

Nothing happens right now. You do not need to decide whether you would like to be interviewed or not until later. You will continue to be seen by your speech-language therapist and students like normal.

When your time working with the students comes to an end, you will be given some more information about the project.

If you would like to involved at that time, you will be able to contact the researcher to let them know of your interest.

Kind regards,

Nicola Henderson
Nikki.henderson@pg.canterbury.ac.nz

Appendix 7: Patient and Family Information and Consent Forms

Nicola Henderson
School of Psychology, Speech and Hearing
Telephone: +6433694414
Email: nikki.henderson@pg.canterbury.ac.nz
07.05.2019
HEC Ref: 2019/98

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

Effects of Intensive Treatment Provision on the Development of SLP Students
Information Sheet for Clients and Families

Kia Ora,

My name is Nicola Henderson, a speech-language therapist with the Canterbury District Health Board and post-graduate student at the University of Canterbury. I am investigating whether involvement in intensive therapy programmes has an effect on the way speech-language pathology (SLP) students develop their clinical skills during block placements.

You have been approached to take part in this study because you have recently had SLP students involved in your care.

If you choose to take part in the study, the researcher will visit you (and your family, if you wish) at your home to have a discussion (expected to be approximately an hour in length) about your experience receiving intensive input from SLP students. With your consent, the researcher will record the conversation to write down the discussion later and identify the key points. You will be offered the opportunity to check what the researcher writes down to make sure they've got the right idea.

You may ask for your raw data to be returned to you or destroyed at any point. If you withdraw, I will remove information relating to you. However, once analysis of raw data starts on 01 February 2020, it will become increasingly difficult to remove the influence of your data on the results.

The results of the project may be published, but you may be assured of the complete confidentiality of data gathered in this investigation: your identity will not be made public. Information will be de-identified and securely stored for five years after the completion of the study, at which point it will be destroyed. A thesis is a public document and will be available through the UC Library.

Please indicate to the researcher on the consent form if you would like to receive a copy of the summary of results of the project.

The project is being carried out as a requirement for Masters thesis by Nicola Henderson under the supervision of Kate Cook, Gina Tillard, and Dean Sutherland, who can be contacted at Kate.Cook@canterbury.ac.nz, Gina.Tillard@canterbury.ac.nz, and Dean.Sutherland@canterbury.ac.nz. They will be pleased to discuss any concerns you may have about participation in the project.

This project has been reviewed and approved by the University of Canterbury Human Ethics

Appendix 8: Research Information for People with Aphasia

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07.05.2019
HEC Ref: 2019/98

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

RESEARCH INFORMATION for PEOPLE WITH APHASIA

Effects of Intensive Treatment Provision on the Development of SLP Students

Information Sheet for Clients and Families

WHO IS DOING THE RESEARCH?

Nicola Henderson

Postgraduate student

Nicola is a **speech-language therapist** researching **student learning** at the University of Canterbury.

The study has been **granted permission** by the **University of Canterbury.**

Appendix 9: Interview Guide for Semi-Structured Interviews

Interview Topic Guide

1. Amount of therapy received
    1. Intensity: length of sessions, frequency of sessions, duration of input and thoughts on this
2. Stroke recovery and change in function
3. Progress to goals
    1. What goals did you have?
    2. Did therapy help achieve those goals?
4. Reflection on student involvement
    1. What was your student like?
    2. Did you feel comfortable with the student?
    3. What did you like or not like about working with a student?
    4. Any concerns?

Appendix 10: Open Text Responses to Post-Placement Confidence-Competency Questionnaire

If you indicated you have learned a new skill, please provide an example in the space below:
I learnt to reflect well on my own practice and my clients, looking at what some behaviours and performance's might might (sic) be a result of and how we can then look to the research to help inform our way forward

Recognising when to step in
Being able to research and appraise literature available for a treatment approach
I learned how to adapt to different clients quickly and not be offended by clients' behaviour, whether if that was intended or not.
Identifying factors that are affecting the client due to personal or environmental changes and adapting therapy based on this information
learning how to constantly update the clients' management plan as they progress through therapy, as well as coming up with a well designed plan to ensure that the clients' language and communication and thier (sic) family are supported after discharge.

In the future, do you think it would be useful to have more practice with intensive clients?	Yes = 6	No = 0
If you answered 'YES' please comment why:		
As the higher intensity of time allows you to develop both your skills and the clinical relationship to a greater level		
When you have more practice at something you improve so it would improve my skill further		
It increases opportunity to practice each treatment approach		
to have more opportunity to practise therapist's own soft skills with different clients		
Allows you to establish stronger rapport, allows you to feel more useful or effective as a clinician		
It allows the therapist to build better raport and stronger relationships with the clients and thier family. It also allows the therapist the look at other factors that are important to the clients an incoporate it into their therapy plan to make their therapy more functional and meaningful. (sic)		