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# Māori aspirations following stroke: A pathway forward for the speech-language therapy field

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## ABSTRACT

**Background:** Attempts to improve Indigenous health outcomes are evident in the speech-language therapy (SLT) field, although they are restricted by a limited evidence base. Prior research has shown that SLT services do not always meet Indigenous stroke survivors' needs, however, few studies have investigated this phenomenon and fewer have explored solutions. Consequently, the SLT field lacks knowledge of appropriate and optimal supports.

**Aims:** To identify and compare experiences and aspirations of Māori stroke survivors, whānau (family), and speech-language therapists (SLTs) in Aotearoa New Zealand regarding SLT service provision.

**Methods & Procedures:** Kaupapa Māori research and interpretive description methodologies underpinned this study. Four Māori stroke survivors, two whānau members, and five SLTs participated in semi-structured interviews. Data were analysed using constant comparative analysis and collaboratively interpreted during a hui (meeting) between researchers and participants.

**Outcomes & Results:** Analysis highlighted six themes spanning experiences and aspirations: (1) tautoko (support), (2) kaupapa Māori (Māori approach), (3) whanaungatanga (relationships), (4) tino rangatiratanga (autonomy), (5) taiao (environment), and (6) kōnekeneke (change). Positive aspects of SLT were described, however, Māori often did not receive optimal supports. Aspirations centred on changes to SLT services and the wider healthcare system.

**Conclusions:** Adaptations to SLT services are indicated to improve the quality of SLT received by Māori following stroke. To meet aspirations described in this study, the SLT profession may incorporate Māori approaches; prioritise strong, collaborative relationships; offer more autonomy to Māori stroke survivors; support the development of SLTs and SLT students; increase public awareness; and encourage change in the wider healthcare system. Many aspirations identified in the current study are consistent with those identified by Indigenous people in Australia, suggesting that some common solutions may exist to improving Indigenous SLT services.

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## Main text introduction

Decolonisation of healthcare is gaining momentum on an international scale. Need for decolonial movement stems from well documented health inequities experienced by Indigenous peoples across the globe (Anderson et al., 2016). In stroke, inequities are evident through higher incidence rates (Santos et al., 2021) and in Aotearoa New Zealand, poorer functional outcomes for Indigenous Māori compared to New Zealand Europeans (McNaughton et al., 2002). Colonisation is a major factor underlying stroke inequities due to cascading effects on environmental, educational, economical, lifestyle, and biological risk factors (Santos et al., 2021). Overcoming transgenerational consequences of colonisation is a complex issue, however, decolonisation can improve Indigenous health (Paradies, 2016).

Consistent with global health, speech-language therapy (SLT) developed from a Eurocentric standpoint (Wylie et al., 2016). Māori aphasia research highlighted a need for decolonisation in SLT stroke services (McLellan et al., 2014b). Although some positive experiences of SLT were documented, Māori people with aphasia and whānau (family) reported inappropriate therapy settings, relationship breakdowns with SLTs, therapy misaligned with Māori worldviews, and lacking SLT knowledge of te reo Māori (Māori language) and Māori identity (McLellan et al., 2014b).

Grounds for change are strengthened by SLT workforce perspectives. Brewer et al. (2015) identified self-perceived competency gaps of SLTs delivering services to Māori with post-stroke aphasia, including limited comprehension of te reo Māori and difficulties forming relationships with Māori clients, whānau, and cultural liaison staff. Further issues included insufficient time for culturally safe practices, lacking evidence informing practice, and few Māori SLTs (Brewer et al., 2015). Despite challenges, SLTs desired to provide effective, culturally appropriate services (Brewer et al., 2015).

Culturally appropriate SLT services are necessary in Aotearoa New Zealand for two primary reasons. Firstly, culture and communication are interrelated (Giri, 2006). Effective communication rehabilitation should be responsive to culture. Secondly, SLTs have a commitment to uphold Te Tiriti o Waitangi. This treaty signifies Māori should receive equal rights and protection as British subjects (Orange, 2011), including the right to access appropriate healthcare (Salmond, 1986). However, SLTs face challenges providing culturally appropriate and equitable services. One prominent challenge is Māori underrepresentation in the SLT workforce. In 2020, 4% of New Zealand Speech-language Therapists' Association (NZSTA)'s members identified as Māori (NZSTA president, personal communication, October 4, 2021) compared to 16.5% of the population (Statistics New Zealand, 2018). Additionally, forms of racism and colour-blindness continue to impact the field. Although documented examples were without malicious intent, they negatively impact Māori (Brewer & Andrews, 2016). Taken together, service improvements are needed to ensure quality SLT for Māori.

Movements to create change in SLT and improve Māori outcomes are evident in Aotearoa New Zealand, however, attempts are informed by limited evidence. The national SLT body wants to ensure "an equity and Te Ao Māori lens is present for research, strategic planning, clinical practice, events and conferences" (NZSTA, n.d., p. 4), indicating support for mātauranga Māori (Māori knowledge) and kaupapa Māori (Māori approach). Yet, Māori perspectives and knowledge remain sparse in the literature, with insufficient Māori

research to inform evidence-based practice in any SLT area (Meechan and Brewer, 2021). Only six studies on stroke-related communication changes had a strong Māori component, and included stroke survivor (range = 1-11) and SLT (range = 10-11) participants (Brewer et al., 2015; Brewer et al., 2020; Collin Stone, 2019; McLellan et al., 2014a; McLellan et al., 2014b; Rosenfeld, 2016).

In those studies, few Māori participants with stroke-related communication changes resided in the South Island of Aotearoa New Zealand. Although “Māori live in diverse cultural worlds” (p. 1), Māori health has historically been homogenised (Durie, 1995). Avoiding further homogenisation requires a range of perspectives from across the nation. Furthermore, research has primarily focused on experiences (Brewer et al., 2015; McLellan et al., 2014b; Rosenfeld, 2016). As identified by McLellan et al. (2014b, p. 539) “solutions-focused research” is needed.

This research investigates the following questions:

- (1) What experiences of and aspirations for SLT are held by Māori in the South Island of Aotearoa New Zealand who have experienced stroke-related communication changes, and their whānau (family)?
- (2) What experiences and aspirations are held by SLTs relating to SLT service provision for Māori with stroke-related communication changes and their whānau?
- (3) What are the similarities and divergences in experiences and aspirations between Māori with stroke-related communication changes, their whānau, and SLTs?

## **Materials and methods**

### ***Methodologies***

Kaupapa Māori research and interpretive description methodologies underlay this research. Kaupapa Māori research is “by Māori, for Māori and with Māori” (Smith, 2015, p. 47). It positions Māori culture and worldviews as valid, supports Māori aspirations, and adopts a critical theory outlook (Pihema, 2017; Smith, 2015). Interpretive description problem solves issues within a discipline and offers clinically relevant, pragmatic insights (Thompson Burdine et al., 2021).

Research by McLellan et al. (2014b) demonstrated successful combination of these approaches as both aim to produce practical solutions benefiting the communities involved.

### ***Ethics and consultation***

The University of Canterbury Human Research Ethics Committee granted ethical approval. Māori consultation occurred through the Ngāi Tahu Consultation and Engagement Group. The NZSTA kaumātua (Māori elder) and University of Canterbury kaiārahi (guide) were consulted for research design and implementation guidance. One co-author (KM, Māori) also supported the consultation process as part of her Māori and Cultural Development role on the NZSTA board.

## Participants

The study involved four groups: 1) four Māori stroke survivors, 2) two whānau (family) members, 3) three Māori SLTs, and 4) two non-Māori SLTs. Potential participants were identified through advertisements, staff members of the Canterbury District Health Board and the researchers' networks. Those identified were approached through email or phone call, provided study information and, for stroke survivors and whānau, invited to meet the researcher. Māori stroke survivors could select whānau to participate. This research was conducted primarily in Canterbury in Aotearoa New Zealand's South Island. One participant was located outside of Canterbury.

All participants were over 18 years and gave informed consent. The following iwi affiliations were reported: Ngāi Tahu, Ngāti Porou, Ngāti Mutunga, Ngāpuhi, Te Ātiawa, and affiliate to all iwi. Stroke survivors experienced at least one stroke, were at least one month post-stroke, and were required to have experienced speech or language difficulties and received SLT post-stroke. Diagnostic communication assessments were not completed as they may have deterred participation. On clinical judgement, three stroke survivors presented with language and one with motor speech difficulties. During interviews, all stroke survivors discussed aphasia, aphasia therapy groups, or strategies used to overcome language difficulties. Each SLT had experience working with Māori following stroke. [Table 1](#) and [Table 2](#) detail further characteristics of stroke survivors and SLTs. Pseudonyms were applied.

**Table 1.** Characteristics of stroke survivors.

ID	Ethnicity	Gender	Age	Time post-stroke	Languages spoken	Whānau interviewed
Tūi	Māori	Female	70	10 years	Te reo Māori, English	Pererū (Husband)
Takahē	Māori	Male		5 months	Te reo Māori, English	Korimako (Wife)
Kōtare	Māori	Female	60	4 years	English, New Zealand Sign Language	Nil
Kāhu	Māori	Male		4 years	Te reo Māori, English	Nil

**Table 2.** Characteristics of speech-language therapists.

ID	Ethnicity	Gender	Age	Languages spoken
Pitoitoi	Pākehā (non-Māori)	Female	33	English
Whio	Māori, Pākehā (non-Māori)	Female	29	English
Huia	Māori, New Zealand European	Female	39	English
Hihī	European	Female	32	English, French
Kōkako	Māori, New Zealand European	Female	45	English

## Procedure

The first author engaged in whakawhanaungatanga (relationship building) with stroke survivors and whānau before data collection. This supported trust formation and provided study information to assist decisions regarding participation. Sessions were conducted in participants' homes, cafes, and hospital.

The first author conducted in-depth semi-structured interviews in participants' preferred settings. All stroke survivor interviews and three SLT interviews occurred in person. Two SLT interviews occurred on Zoom due to geographical distance between the

participant and researcher and COVID-19 lockdown restrictions. Semi-structured interviews were approximately one hour (range = 30 minutes to 1 hour and 21 minutes). One stroke survivor received a follow-up interview as their whānau member could not attend the first interview. Participants were asked about experiences receiving or providing SLT post-stroke and aspirations for future SLT services for Māori following stroke. The questions in interview guides are presented in Table 3. Following semi-structured interview methods, interview questions were flexible, with variance between participants (Fylan, 2005). All interviews were recorded and transcribed verbatim in Otter.ai (<https://otter.ai/>).

Following interviews, participants were invited to attend a hui (meeting) at the University of Canterbury to discuss and interpret results. Two stroke survivors, one non-Māori SLT, and three authors attended.

**Table 3.** Semi-structured interview guide.

Questions for stroke survivors and whānau	Questions for Māori and non-Māori SLTs
<ul style="list-style-type: none"> <li>● What was SLT like for you?               <ul style="list-style-type: none"> <li>○ When did SLT work well?</li> <li>○ When did SLT not work well?</li> </ul> </li> <li>● How was your SLT?               <ul style="list-style-type: none"> <li>○ What did you like?</li> <li>○ What did you not like?</li> </ul> </li> <li>● Is there anything you would want to change about the SLT you had?</li> <li>● How could SLTs best support Māori after stroke?</li> <li>● What are your hopes for SLT in the future?</li> </ul>	<ul style="list-style-type: none"> <li>● When providing support for Māori post-stroke, what things worked well?</li> <li>● When providing support for Māori post-stroke, were there any challenges?</li> <li>● What do you think about the cultural competency of SLTs working with Māori post-stroke?</li> <li>● What are your hopes for future SLT provided to Māori stroke survivors?</li> <li>● Is there anything that could help SLTs work effectively with Māori?</li> </ul>

### **Data analysis**

Transcripts were analysed using constant comparative analysis (Boeije, 2002) which was previously combined with kaupapa Māori research (Wepa & Wilson, 2019) and interpretive description (Olsen et al., 2013) to produce insights relevant to Māori and a clinical field. Consistent with kaupapa Māori research, a Māori philosophical worldview underpinned analysis. This required appreciation of the interconnectedness of all things (King et al., 2017). Participants' discussion of the healthcare system, universities, and community could be perceived as beyond the scope of the research questions as these topics did not specifically pertain to SLT. However, a relational viewpoint allowed the researcher to identify their connection to stroke survivors' SLT experiences. Interpretive description recognises that conceptualisations are formed by the researcher and acknowledges that researchers bring foreknowledge to research (Hunt, 2009; Thorne et al., 2004). Thus, providing space for researchers to adopt Māori philosophy, distinguish relevant data, and determine the structure of data (Thorne et al., 2004).

Constant comparative analysis was employed, in congruence with interpretive description's aims. Through reading and re-reading transcripts, the researcher established closeness to the data and determined relevant data to extract (Boeije, 2002; Thompson Burdine et al., 2021). Data were compared within interviews to develop codes, categories, and themes. Next, data were compared between interviews, within groups to deepen definitions associated with themes and identify relationships or divergences. Finally, data were compared between groups to identify similarities and differences between stroke

survivors, whānau, Māori SLTs, and non-Māori SLTs. Within and between group comparison developed knowledge of shared and contrasting perspectives of various people involved in the post-stroke SLT journey, aligning with interpretive description's focus on producing holistic understandings of human health experience (Thompson Burdine et al., 2021).

### ***Methodological integrity***

While the first author has whakapapa Māori (Māori ancestry; Taranaki, Ngāti Raukawa), they were reconnecting to te ao Māori (the Māori world) and developing knowledge of Māoritanga (Māori culture). This author received cultural guidance from a Māori stroke survivor and kaumātua (Māori elder), a kaiārahi (cultural guide), and a Māori co-author (KM).

Researchers adopted a kaupapa Māori stance to data collection and analysis, applying knowledge from cultural guidance and literature review, of Indigenous health contexts. To manage assumptions about post-stroke SLT and ensure findings were grounded in participants' perspectives, researchers collaboratively interpreted results with participants.

The influence of academic culture required consideration. Resistance to participation from potential Māori participants was anticipated due to historically negative research experiences for Indigenous peoples (Smith, 2012). Researchers increased the possible number of whakawhanaungatanga (relationship building) sessions to support trust development. Moreover, researchers maximised self-determination; participants could interpret results alongside researchers and retain control over the use of their data by reviewing outputs before dissemination.

The richness of data and interpretation were enhanced by involving people with diverse backgrounds. SLT participants were Māori and non-Māori. Capturing Māori SLT perspectives aided the research in supporting Māori aspirations and decolonising SLT. Non-Māori SLT views were important considering the SLT workforce is comprised mostly of non-Māori (NZSTA president, personal communication, October 4, 2021). The research team additionally brought diverse SLT experiences. The first was an SLT student, who had experience providing aphasia therapy and, at the time of this study, was completing a stroke-related communication disorders clinical placement. The co-authors, an SLT clinical educator and SLT researcher, were experienced providing SLT to older populations in stroke and dementia.

## **Results**

Six themes emerged, spanning participants' experiences and aspirations: (1) tautoko (support), (2) kaupapa Māori (Māori approach), (3) whanaungatanga (relationships), (4) tino rangatiratanga (autonomy), (5) taiao (environment), and (6) kōnekeneke (change). Stroke-related communication difficulties are typically described as 'disorders' or 'impairments'. To align with need expressed in this study for less impairment-based viewpoints in SLT, this article will refer to stroke-related communication disorders as 'communication changes'. For ease of reading, pauses, interjections, and reformulations were removed from quotes. Additional data is presented in [Tables 4-9](#).

## Tautoko (Support)

### Experiences

Stroke survivors and SLTs discussed positive intentions of SLTs to support Māori stroke survivors as effectively as possible. While Māori and non-Māori SLTs noted their “*willingness*” (Huia) and “*high aspirations*” (Hihi), stroke survivors described positive outcomes arising from such intentions. Two stroke survivors believed SLTs directly improved their communicative abilities. Others felt supported to express spiritual beliefs and regain freedom. However, some stroke survivors and Māori SLTs expressed that SLT does not always meet Māori needs. For stroke survivors, acceptance and inclusion of Māori ways were limited: “[*Within SLT sessions*] *There is a point, that living Māori and all that sort of thing needs to be parked for now*” (Takahē); “[*People [clients in SLT groups] say*] [. . .] *I don’t want those Māori things again*” (Kāhu). One Māori SLT believed SLTs do not always understand why Māori need different modes of support. Despite this being “*unintentional*” (Whio), it could impact SLT accessibility: “[*Some people [SLTs] have only come from one monocultural background. That is the only way they’ve seen and they don’t travel or they don’t open their mind to other cultures. They don’t know that you can work differ-, like it just doesn’t come to their brain*” (Whio); “[*I’m trying to [. . .] make myself accessible to these whānau. That is a huge barrier because not everyone will place that same importance on their patients because they might not understand the reason why these patients need these different ways of working*” (Whio).

Stroke survivors, Māori SLTs, and non-Māori SLTs mentioned barriers in the healthcare system which restricted support. Limited time availability of SLTs was noted: “[*I think you’re only allowed for [. . .] half an hour, those therapists.*” (Kāhu); “[*Sometimes, my caseload would just be so hectic that I just can’t spend that extra time*” (Whio). Additional barriers were discussed by non-Māori SLTs, including rigid, service-centred policies and procedures; services that are not always offered when needed by stroke survivors; and historically poor treatment of Māori in the healthcare system: “[*There’s this really understandable reluctance sometimes to engage with a service because your past experiences or the experiences you’ve heard about haven’t been culturally safe*” (Pitoitoi).

Stroke survivors, Māori SLTs, and non-Māori SLTs discussed community support and low public awareness about stroke-related communication changes. One Māori SLT mentioned low awareness of Māori communities: “[*The general public and Māori communities. I don’t know if there will be awareness, of what could be offered. Imagine that someone had a stroke and they had aphasia, it might be the first time that whānau’s even come across it*” (Huia). For stroke survivors, low awareness was associated with varying support. One found some community members helpful, however, it was rare for people to “*stop and listen*” (Kōtare).

Supports enabling SLTs and SLT students to work well with Māori stroke survivors were raised by Māori and non-Māori SLTs. Some experienced positive support, particularly towards cultural competency development. Others found supports limited and difficult to access, largely due to limited time: “[*I just don’t find I have enough time. Because face to face contact is most of your time*” (Kōkako). There was agreement among Māori and non-Māori SLTs that universities are enabling students to support Māori clients well. This was attributed to programme leaders and passionate lecturers who extended courses beyond the curriculum and incorporated “*tikanga [customary values and practices] models*” (Huia).



Others reported enhanced cultural safety for Māori students within university SLT programmes: *“The University [of Canterbury] has made changes to its programme to be more supportive of [...] Māori students, so it’s a [...] more culturally safe course”* (Pitoitoi).

### **Aspirations**

Participants wanted improved SLT support for Māori stroke survivors. One stroke survivor hoped SLTs would persist with support throughout the post-stroke journey: *“Do try and wrap around them because it’s a journey [...] Don’t give up, to say there is a group or a whatever.”* (Kōtare). For Māori and non-Māori SLTs, increased understanding and confidence to engage with Māori culture were important: *“Definitely te reo but also an appreciation of tikanga. Get on that waka [canoe] of learning”* (Whio). Māori and non-Māori SLTs hoped efforts to improve supports would be undertaken by all SLTs, not only Māori SLTs: *“Seek out opportunities to learn more, get excited when they get to work with Māori patients, when they get to be part of that way of working [...] I really want to see that for all speech therapists. I don’t want it to be something which is just for Māori speech therapists”* (Hihi); *“At the same time, having tauivi [non-Māori], that are great allies because there’s only a few of us Māori. We can’t have all of the load to fix the system”* (Whio).

Aspirations also involved increasing public awareness of stroke-related communication changes. One whānau member believed *“the general public have got to be taught”* (Pererū) and a Māori SLT commented *“there just needs to be a lot more education”* (Whio). Māori and non-Māori SLTs noted the importance of reaching wider communities through advocacy. Suggestions included sharing *“stories and outcomes of those people [stroke survivors] and their whānau”* (Pitoitoi), producing *“more snappy videos, or those really deep and meaningful videos that people want to share”* (Whio), and *“visiting different high schools to talk [...] about speech therapy and different impairments”* (Pitoitoi).

Agreement arose, between Māori SLTs, non-Māori SLTs, and stroke survivors, regarding aspirations for improved SLT student support. One stroke survivor hoped students would learn through examples focusing on Māori: *“There should be different scenarios to [...] help you [students] with Māori”* (Tūi). Māori SLTs wanted integration of cultural competency in universities *“to the point where it’s no longer tokenistic”* (Whio) and a focus on teaching students to apply tikanga models and *“translating it into practice”* (Huia). One non-Māori SLT hoped for further increases in university courses’ cultural safety *“so that more people [Māori] want to come and study”* (Pitoitoi).

More professional development was desired by Māori and non-Māori SLTs, including educational opportunities and spaces for discussions about cultural competency development: *“The hospital that I used to work at has just started doing a cultural hui once a month [...] Just trying to keep the conversation going about cultural challenges [...] Being able to talk about it openly [...] I’d like to see that happening more, everywhere”* (Hihi).

A final SLT aspiration in this theme, held by Māori and non-Māori, was for service and healthcare system changes that would better support Māori stroke survivors and whānau: *“I’d just like there to be more work [...] towards, fixing a system that’s so square. Want to make it more round [...] so that it’s malleable (Whio); “If there was the expectation that the service would be flexible [...] So that it’s not always the whānau that are having to make accommodations”* (Pitoitoi)

**Table 4.** Quotes in the theme of tautoko (support).

Tautoko	Stroke survivors and whānau	Speech-language therapists
Experiences	<p>“It [SLT] gives my freedom back ... As well as ... being able to communicate” (Tūi).</p> <p>“I have been wrapped around all the way through [the SLT journey]” (Kōtare).</p> <p>“There’s a lot of people [in the community] don’t wanna do it too ... Don’t wanna talk to you ... Because the way you talk” (Kāhu).</p>	<p>“I think everyone’s [SLTs’] hearts are in the right places ... And I know that every person I talked to wants to be doing their best for Māori. So I think we’re doing really well with that. We have really good intentions and good hearts for what we’re doing” (Hihi).</p> <p>“The medical profession hasn’t been historically very good at engaging with people who are Māori” (Pītoitoi).</p> <p>“I think awareness of communication impairments ... is very low ... And I think that’s even less so for Māori” (Pītoitoi).</p> <p>“And I think it’s the people who, who run the [university SLT] courses ... I think they have ... a passion for it ... I think that, they’ve ... managed to get some really good leaders in those programmes ... who really care about it” (Hihi).</p>
Aspirations	<p>“Make sure that those who’ve got speech problems or communication problems get an alarm. ... I feel more safe going out on my own now ... I could be in the mall or somewhere and I lose my speech ... and I can pull this [safety alarm]” (Tūi).</p> <p>“For speech therapy, is there anything else you would really like to see in the future” (Interviewer)?</p> <p>“Make sure that becoming a therapist, part of it will be that these modern technology phones ... that, in the future ... social welfare, whatever, remember that people like me ... do need these tools ... so we’re able to communicate to other people” (Kōtare).</p> <p>“You have to remove all those barriers. ... Removing fear and obstacles and barriers and going ... we see them, we acknowledge them ... but we believe ourselves to be bigger than that” (Korimako).</p>	<p>“Just a bit more acknowledgement [in SLT] that different cultures need different needs. ... And that ... one standard form doesn’t fit ... all” (Kōkako).</p> <p>“What I would love to see is just a workforce ... that feels like they can engage in day-to-day Māori tikanga [Māori customary values and practices]” (Hihi).</p> <p>“Certainly, a bit more education [for SLTs] would be nice” (Kōkako).</p> <p>“Teaching more around ... tikanga [Māori customary values and practices] models. ... What I’d hope to see ... is that they [universities] don’t stop at those models. ... Like actually translating it into practice ... You don’t have to practice the models on people who are disordered. Could be on just people out in the community” (Huia).</p> <p>“Even more of ... the core competencies for SLTs, having cultural competency ... at the same level as we put on dysphagia and communication. I, that is like my dream ... And that being filtered down then essentially, to the universities” (Whio).</p> <p>“And then also reaching different communities. Like when public health people go to talk to people about stroke prevention ... having a speech therapist there to talk about ... patients that they’ve ... seen” (Whio).</p> <p>“More visibility of ... Māori [and] Pasifika ... More ... minority cultures in ... stakeholder positions” (Whio).</p>

## **Kaupapa Māori (Māori approach)**

### **Experiences**

Participants experienced a Western-dominant approach in SLT and healthcare. The current approach was described as impairment-based and lacking holism, te reo Māori (Māori language), Māori worldviews, and hauora Māori (Māori health) concepts. One whānau member noted: “We had to keep reminding hospital staff [...] there’s more to him than just

the physical [...] When whānau support through the hinengaro [mental and emotional wellbeing] and the wairua [spiritual wellbeing], it actually increases the healing, and the tinana [physical wellbeing] side [...] They kind of just kept ignoring that" (Korimako). A Māori SLT described the adoption of European frameworks in the healthcare system as "going away, even further from where we need to be going" (Kōkako). A non-Māori SLT mentioned expectations that Māori patients "fit in with our timeframes and our workplace locations and our cultural practices" (Pītoitoi). Both SLT groups noted the lack of Māori worldview and te reo Māori within SLT resources: "Predominantly the stories in there [post-stroke guidebook for stroke survivors and families] would be about the recovery of people who are Pākehā [non-Māori]" (Pītoitoi); "I got someone to read a medication label. It was written in English [...] He was like, 'oh, this is all Pākehā,' and then kind of walked away" (Whio). Similarly, one whānau member noted most assessments and therapy tasks were in English and did not match her husband's worldview: "I tried to say [...] he's a bilingual man, therefore you're really only assessing one part. Whereas the part that sings inside him is te reo. That, I would argue is far further along. But you don't measure that so, that's not a fully holistic assessment" (Korimako); "It's not in his worldview. So it's hard to stick" (Korimako).

Participants described positive experiences of using Māori approaches in SLT and healthcare. Non-Māori SLTs discussed the supportive, whānau inclusive nature of kaupapa Māori wards (hospital wards based on Māori principles) and found incorporating te reo Māori and karakia (Māori ritual chants) led to more meaningful SLT. For one stroke survivor, inclusion of te reo Māori supported progress in their language abilities: "She [the SLT] was fantastic. She was somebody who would kōrero [speak Māori]. She would do Māori and Pākehā [English. [...] I found how easy it was for me to learn things" (Takahē).

### Aspirations

Stroke survivors wanted recognition that "there's a Māori side and a Pākehā [non-Māori] side" (Tūi) within SLT services and university SLT programmes. Although one stroke survivor did not wish to knock down Western approaches, they believed inclusion of both approaches was essential: "You gotta have the other side. For the other side [Pākehā] and for the Māori thing [...] Can't have it for the one way" (Kāhu). When discussing SLT programmes, this stroke survivor expressed the importance of Māori having opportunities to live as Māori: "We not all gonna be Māori [...] But some would like to be a Māori" (Kāhu).

Aspirations were expressed for a Māori approach in SLT services and healthcare. One stroke survivor and Māori SLT hoped for kaupapa Māori (Māori approach) SLT programmes, grounded in te ao Māori (the Māori world), including concepts such as atua (Māori gods), wairua (spirit), hinengaro (mind), te reo Māori, kai (food), kapa haka (Māori performing arts) and waiata (song). It was believed this would result in more meaningful therapy for Māori stroke survivors. Māori SLTs wanted a strengths-based approach which "maintains that mana [spiritual power]" (Whio). This was perceived as "a huge cultural view of Māori [...] and the way of life" (Whio).

Māori health workforce expansion was important for stroke survivors and Māori SLTs. One stroke survivor believed Māori SLTs could best support Māori stroke survivors. Another hoped for more Māori professionals in all healthcare professions: "Want more [Māori health workers] across the health board, across all the health scenarios." (Kōtare). A Māori SLT contrastively wanted more professionals in Māori health teams: "There's probably always a need for more Hauora Māori people" (Huia).

Māori SLTs aspired for more Māori research and assessment, treatment, and informational resources, created within a “*mātauranga Māori [Māori knowledge] ... framework*” (Huia).

**Table 5.** Quotes in the theme of kaupapa Māori (Māori approach).

Kaupapa Māori	Stroke survivors and whānau (family)	Speech-language therapists
Experiences	<p>“He recited ... karakia [Māori ritual chants] yesterday. Like, four of them. ... But when they [the SLT] assessed him they said, ‘can you read? And we’re like, ‘he just read four karakia [Māori ritual chants]’. ... And like ... ‘are you able to recite?’ I’m like, ‘did you not just hear it?’ ... But because it’s not in that structure that they’re using” (Korimako).</p> <p>“They [the SLT] did this assessment ... where they ranked him on different things ... and he got like ones and twos. He didn’t want to talk for the next three days ... He sunk ... It took me two days to undo that” (Korimako).</p>	<p>“We’re going to very much the ... Calderdale type frameworks. ... Which is very ... a European-based style. So we’re going away, again, even further from where we need to be going” (Kōkako).</p> <p>“I think ... we expect so much of our ... patients, and particularly our Māori patients to accommodate us ... As opposed to making the changes ourselves ... and support them” (Pītoitoi).</p> <p>“Not being able to speak te reo Māori [Māori language] ... that has certainly been a barr-, like they [Māori stroke survivors] are almost like disappointed” (Whio).</p> <p>“We’re also so medical focused ... They [Māori stroke survivors] want to be able to think of medicine in a ... different way” (Kōkako).</p> <p>“For a lot of our cognitive communication patients ... the type of therapy that you do is ... You’re trying to stop them from being tangential, stop them from trying to ... go off topic and ... you try and rein them in ... That kind of therapy and doing impairment-based stuff is not ... I feel like I would have to have a really good relationship with the patient and their whānau [family] to be able to do stuff like that” (Whio).</p> <p>“But what I felt was extremely valuable was that it [kaupapa Māori ward] was so open and ... whānau were encouraged to stay ... They were welcomed to stay ... on that ward. ... It seemed like, from what they were telling me that it ... felt really supportive, and ... less kind of singled out or on your own I think” (Pītoitoi).</p>
Aspirations	<p>They’ve [universities have] got to recognise there’s two sides to a coin ... If you try and force the Pākehā way onto Māori it doesn’t work” (Tūi).</p> <p>“Your wairua [spirit] and all that. ... That’ll be ... part of the [SLT] programme. ... The hinengaro [mind]. ... You need all of that. ... Waiatas [songs]. ... That’s all part of it too. ... For your atua [gods] and ... your wairuas [spirit] ... It’s all part of it. ... With our Māori programmes ... We gotta have some Māori [Māori language]. ... Well I understand about kai [food]. ... That’s being Māori. ... Well that’s what I’m saying, another programme ... and now this is the way” (Kāhu).</p> <p>“You have to find a [an SLT] programme that’s gonna ... help Māori ... And ... I think that ... it’s nice to be a Māori ... You have to be a Māori [SLT] ... to do that” (Kāhu).</p>	<p>“I’d like to see ... a speech therapy service where that’s [a Māori way of working is] the mainstream ... rather than just a siloed part of our work” (Hihi).</p> <p>“They [SLTs] want to be like, ‘give me some resources’ ... ‘where [are] some resources that are translated ... into te reo [Māori language]?’ ... Actually just translating the WAB [Western Aphasia Battery] into te reo [Māori language] isn’t gonna get you ... what you want ... Or using a semantic feature analysis ... and just translating that isn’t necessarily going to ... change the outcomes or the practice ... People ... I think, wanted those resources ... And you know, it’s kind of that, that understanding of, that’s the end point ... Not the starting point ... You know, it’s that slow process ... And actually creating resources in a ... mātauranga Māori [Māori knowledge] ... framework that are appropriate” (Huia).</p> <p>“It’d be cool to have a waiata [singing] group or a kapa haka [Māori performing arts] group” (Whio).</p>

## Whanaungatanga (Relationships)

### Experiences

Relationships were important to the post-stroke journey for all groups. Māori and non-Māori SLTs valued relationships with stroke survivors and whānau: *“It’s about maintaining that relationship [...] with a patient and restoring their mana. Also involving whānau members if you can”* (Whio); *“It’s worked well when you’ve had that time to really build relationships [with Māori stroke survivors]”* (Hihi). Stroke survivors and whānau members valued relationships with other stroke survivors and community members: *“I look forward to every day, every week, because I can see a person in my [aphasia] book club who has growing”* (Kōtare); *“What I found with [SLT] was that she [...] gave you [stroke survivor] sentences and tools that you could use to engage people [in the community]”* (Korimako).

Stroke survivors, Māori SLTs, and non-Māori SLTs discussed lacking relationships in some areas of SLT and healthcare. Disconnection between Māori stroke survivors and SLT services following hospital discharge was mentioned by a Māori SLT and stroke survivor. This created difficulty for stroke survivors accessing further SLT services: *“The only way you can find, that I found it [aphasia groups]. The only way that put me through it, was through them [SLTs in hospital]”* (Kāhu); *“Are they [Māori stroke survivors] actually accessing some of the community groups that we provide? I don’t think we necessarily make those accessible”* (Kōkako). One Māori SLT perceived lacking relationships between SLT services and hauora Māori (Māori health) services: *“There is actually a Māori community based centre [...] I’m not sure we necessarily link in with them”* (Kōkako).

Non-Māori SLTs detailed factors influencing relationship building. One believed comfort levels towards engaging with Māori were low overall among SLTs and increasing those would benefit therapeutic relationships: *“It’s a small minority of speech therapists who feel capable to engage in a Māori way”* (Hihi); *“What’s been a big difference for me, is just learning through classes and things to feel comfortable [...] That makes all the difference for the relationship”* (Hihi). To another, barriers in the healthcare system affected relationship building, namely limited time, Western perspectives of productivity, and a focus on money: *“Often hospitals get really focused on productivity [...] And don’t necessarily see relationship building [...] as something that’s productive [...] We know that time is actually incredible [...] But I think there still might be a bit of a focus on money, basically”* (Pitoitoi).

### Aspirations

Stroke survivors, Māori SLTs and non-Māori SLTs desired strong therapeutic relationships. Deep connections and knowing the individual person were particularly important. One stroke survivor hoped SLTs would *“know my personality, then ask, draw me out”* (Kōtare) and a non-Māori SLT wished for *“genuine person to person connection”* (Pitoitoi). Connecting in ways that suit individual Māori was discussed by one Māori SLT, as Māori have varying connections to te ao Māori: *“Should we be getting into the maraes [Māori meeting grounds]? Getting people in as they go through the doors. Then are they associated? Not everyone’s associated down here [in the South Island] with the marae”* (Kōkako). Māori SLTs hoped relationships with Māori stroke survivors would be treated as *“collaborative”* (Kōkako) and as a *“partnership”* (Whio).

Māori and non-Māori SLTs aspired for inter-community connections. This included greater connection between health services and communities: *“I think our health services just need to be more connected to our communities so that the first time you meet someone isn’t necessarily when you’re in this health crisis situation”* (Pitoitoi). They hoped to establish relationships between Māori stroke survivors and whānau and other Māori: *“Connecting people who are Māori who have had a stroke with other people who are Māori, and their whānau for direct support. Having more of that kind of networking might be really beneficial”* (Pitoitoi). For others it was important to develop ongoing relationships between SLT and Māori health services: *“It’s working together [. . .] With Hauora Māori and not, some people just bring them in when they want something”* (Huia).

Māori and non-Māori SLTs also aspired to reduce healthcare barriers which restrict relationship building. One Māori SLT wanted more whānau inclusion in hospital: *“If we could get families to be able to come in and stay and support them [. . .] At the moment, the system, I don’t think it allows for that”* (Kōkako). A non-Māori SLT stated: *“The time pressure of some of the services is a barrier to proper relationship building. Which is something that would be wonderful to change”* (Pitoitoi).

**Table 6.** Quotes in the theme of whanaungatanga (relationships).

Whanaungatanga	Stroke survivors and whānau (family)	Speech-language therapists
Experiences	<i>“That’s another thing that keeps me going. . . . People like herself [person with aphasia] and other people [with aphasia]”</i> (Kāhu).	<i>“When you’re trying to build genuine connections with people and try to undo some of those negative experiences that might have happened in the past . . . having a time limit of six hours across six weeks, is just not conducive to that”</i> (Pitoitoi). <i>“The environment really makes a difference . . . .Being in their environment”</i> (Hihi).
Aspirations	<i>“I know . . . it’d not be easy for you, but you are a speech-language person [therapist]. So, you have to step over the fence, climb down and do the other person’s [client’s] perspective”</i> (Kōtare). <i>“Having people [SLTs] around like that. . . . To support us. . . . That’s what we need, people like that to support them [Māori stroke survivors] . . . . Just to have that start . . . . There at the start”</i> (Kāhu).	

## Tino rangatiratanga (Autonomy)

### Experiences

Autonomy was important for post-stroke recovery in all participant groups. One stroke survivor experienced positive outcomes by figuring out their own communicative strategies: *“I do my own texting the way I, probably easier for me”* (Tūi); *“I use my own sign language. I was never taught”* (Tūi). Their whānau member stated that *“their [SLTs] intentions are really really good, but [. . .] with some people [stroke survivors] they’ll say [. . .] ‘I’d like to figure things out myself’”* (Pererū). For a non-Māori SLT, autonomy within sessions was important: *“It’s worked*

well when you've had that time to [...] make sure that they [stroke survivors] know [...] you're going to respect what they want to do" (Hihi).

Stroke survivors and Māori SLTs described the lack of autonomy that is common for Māori stroke survivors within SLT: "We're so focused on getting them doing what we want them to do, we're not actually taking into account what they necessarily want to be doing" (Kōkako). Both groups described limited opportunities for Māori stroke survivors to give input in SLT and one Māori SLT expressed a lack of knowledge about Māori stroke survivors' wants and needs: "I'm not sure that I even feel myself, how they necessarily want to be greeted or treated" (Kōkako). Some stroke survivors received unclear health or SLT information that was not in te reo Māori nor in "simple terms" (Tūi) and felt left in the dark: "So much doesn't get told to us" (Takahē). One stroke survivor broadened the issue to healthcare, believing his wishes to be with whānau were not listened to by healthcare professionals: "As soon as our hearts, want to be amongst the families, nobody even wants us telling them" (Takahē).

### Aspirations

Stroke survivors, Māori SLTs, and non-Māori SLTs hoped Māori stroke survivors would be afforded more autonomy. For Māori stroke survivors and SLTs, this meant more stroke survivor input into SLT services: "Give me an opportunity to say, 'what do you think about this?' Not saying, 'this is what we'll do'" (Kōtare); "I'd like to see more consumer input to design services" (Huia). A non-Māori SLT hoped for "a service that values, not only in its policy writing, but in its practicalities, accommodating for the clients." (Pītoitoi).

**Table 7.** Quotes in the theme of tino rangatiratanga (autonomy).

Tino rangatiratanga	Stroke survivors and whānau (family)	Speech-language therapists
Experiences	<p>"I get so frustrated when people go, 'you do it this way'" (Tūi).</p> <p>"I don't understand ... their [aphasia group] rules sometimes ... We have to listen to a person that is making a speech ... And we cannot ... interrupt them ... until the end ... But the thing is, you need it to be on the spot ... You will forget ... So, you can interrupt them surely ... But ... These are the rules set in stone" (Kōtare).</p> <p>"But with the information that we got when I first had my stroke, I couldn't understand a word that they, they had it in [unintelligible] words ... Instead of having it, well I guess in Māori, but in simple terms" (Tūi).</p>	<p>"We don't really ... take feedback from ... patients ... We're not very good at ... asking ... how well are we doing ... for you? So without ... that ... piece ... we're kind of just saying from our point of view, what we think ... is going well" (Huia).</p> <p>"We've talked about doing surveys ... of people with ... communication difficulties ... There's outpatient surveys that people can fill in online ... I don't know what ... percentage of Māori fill those in ... I don't think it's, matches the percentage of people ... who access health care ... People [sigh] don't wanna fill out paper ... Conversations are ... really important" (Huia).</p>
Aspirations	<p>"We have really got to start fighting for what we are entitled to ... instead of being suppressed" (Pererū).</p>	

## Taiao (Environment)

### Experiences

Stroke survivors, Māori SLTs, and non-Māori SLTs believed the environment influences SLT and post-stroke recovery. They valued environments which fostered connection. For one stroke survivor, connection to physical environments was important

in SLT sessions: *“The [university] campus is a place to be therapeutic [...] The gardens and tranquillity [...] This is what Māori do. They can sense it, they can feel it. [...] This is who they are”* (Kōtare). Comparatively, a non-Māori SLT felt interpersonal relationships were fostered through stroke survivors’ home environments: *It’s been easier to develop a real relationship, in a home setting”* (Hihi). One stroke survivor expressed preference for in-person SLT settings compared to online environments: *“Zoom is not, no [...] It distracted me”* (Kōtare). Several SLTs, Māori and non-Māori, perceived hospital environments as unsupportive for Māori stroke survivors. One suggested Māori patients were *“put in a world they don’t feel comfortable in”* (Hihi). SLTs viewed service types (e.g. acute, rehabilitation, or community services), work-place, and geographical location as impactful: *“There’s a lot less Māori people down here [South Island]. I’ve noticed that it [Māori culture] doesn’t come into the day-to-day as much here”* (Hihi). For one Māori SLT, ability to express Māori identity varied by geographical location: *“People in the North Island, who have a lot more, not availability [...] We just don’t seem to get those people [Māori] through the doors [...] I’m definitely [laugh] a white Māori [...] It’s almost like we can’t be recognised in that [Māori] way”* (Kōkako).

**Aspirations**

Neither group discussed aspirations within taiao (environment).

**Table 8.** Quotes in the theme of taiao (environment).

Taiao	Stroke survivors and whānau (family)	Speech-language therapists
Experiences		<p><i>“I’ve been very lucky that with ... my two workplaces ... that ... I’ve always been very support- do whatever it takes to ... get it right for our Māori patients. But ... I know that others in other ... work settings have not had that same experience”</i> (Whio).</p> <p><i>“It probably depends on ... the environment as well as ... acute, rehab, community”</i> (Huia).</p> <p><i>“I think it’s a bit of a mixed bag ... Some of it is dependent on the team, the environment ... What part of the country you might be in ... Like you could work ... up in Northland [region in the North Island of Aotearoa New Zealand] for example, and be ... really immersed in ... Māori culture and tikanga [Māori customary values and practices] and have ... people supporting you really closely. Not to say that they’re always gonna do a great job of it, but that opportunity ... Whereas ... compare it to Christchurch [city in the South Island of Aotearoa New Zealand] ... I don’t know what it’s like in the community ... Inpatients are still very much a Western ... environment”</i> (Huia).</p> <p><i>“There was a really good phrase ... about the hospital world ... I think, we get just kind of embedded in it ... when we start working in a hospital. And there’s a certain way of doing things, which is just ingrained in the day-to-day operations in a hospital. ... It’s very oppressive and it’s very Western oppressive”</i> (Hihi).</p> <p><i>“They [Māori stroke survivors] want all those supports around them. And we just don’t have those facilities ... [Sigh] our whānau [family] room has [hospital] beds in it”</i> (Kōkako).</p>
Aspirations	Nil	Nil



## **Kōnekeneke (Change)**

### **Experiences**

Kōnekeneke centred on adaptations made by the SLT field or healthcare system to better serve Māori. Non-Māori SLTs believed there was a *“real willingness”* (Pītoitōi) from SLTs to adapt services, however, one stroke survivor perceived reluctance from Pākehā (non-Māori) towards changing healthcare: *“They’ve [Pākehā] never wanted to change anything, like the health system”* (Tūi). SLTs’ experiences of visible change varied. Some noted increased awareness, education, professional development resources, and opportunities to support Māori stroke survivors despite change being *“a slow process”* (Pītoitōi). Contrastively, one Māori SLT had not seen visible change in her workplace: *“We’ve gotta change something [. . .] At the moment, we’re not doing any”* (Kōkako).

SLTs who experienced change expanded on who drove change. Most believed change was largely driven on an individual level and one Māori SLT felt change was often left to Māori SLTs: *“I do feel like I have to drive a lot of it, within speech therapy”* (Huia). One non-Māori SLT described attempts to circumvent barriers, however, barriers prevented unified change: *“Some of the ways that we are as a profession, trying to make changes [. . .] might be that subtle civil disobedience of just ignoring recommendations about how long to see someone. As opposed to something unified, that might get bigger change overall. I think that’s simply from a nature of trying to do the best that you can, for the people that are in front of you, and maybe having limited time, or energy or resources to fight the bigger fight”* (Pītoitōi).

The thought of change was overwhelming for Māori and non-Māori SLTs. Despite feeling that SLT services were not meeting Māori needs, some were unsure where to begin creating change: *“You know it’s not working, but not quite sure how to change it or where to start”* (Kōkako); *“It’s like whoa, where do we even start? I just think that so many people don’t even try to contemplate it. Because it’s so overwhelming”* (Hihi).

### **Aspirations**

Stroke survivors, Māori SLTs, and non-Māori SLTs aspired for persistent change. One stroke survivor expressed hope for forward momentum: *“We need to go forward with it [. . .] Find new ideas”* (Kāhu). This was reflected by Māori and non-Māori SLTs who wanted *“that fire and that change to keep going”* (Whio) and hoped for *“keeping the momentum going”* (Pītoitōi). One Māori SLT wished SLTs would see change as a *“poutama [stepped pattern representing levels of learning]”* (Huia).

Māori and non-Māori SLTs discussed various aspirations for who would drive change. One Māori SLT wanted change emerging from individual SLTs, particularly as *“more of a personal journey”* (Huia). Non-Māori SLTs aspired for change at a *“higher up level”* (Hihi) from *“leaders of the hospital”* (Hihi) and unified change: *“If we could be more unified, [. . .] we might achieve more change faster”* (Pītoitōi). One Māori SLT hoped future generations would drive change through differing viewpoints and deeper understandings: *“We’ll get there. I just hope the generations, your view and my children coming through will, be understanding”* (Kōkako).

**Table 9.** Quotes in the theme of kōnekeneke (change).

Kōnekeneke	Stroke survivors and whānau (family)	Speech-language therapists
Experiences		<p>“As a profession, I think we’re improving ... our services ... .There’s more awareness and more ... opportunities for people to be able to support Māori ... .It’s moving ... with the expansion of models and the teaching ... Hui Process and Meihana Model ... .And then you’ve got ... Karen’s [Karen Brewer’s] ... module ... .Which is really great to help people [SLTs] kind of move ... to a bit more practical” (Huia).</p> <p>“There’s ... a lot of work being done on individual levels to change things” (Pitoitoi).</p>
Aspirations		<p>“I think we’re just at the right time to be like, catching that wave and just like, you know, going on with it and just keep pushing” (Whio).</p>

## Discussion

### *The Aotearoa New Zealand context*

Māori in Aotearoa New Zealand have expressed variable post-stroke SLT experiences (McLellan et al., 2014b). Although some positive experiences were described in this study, comments by stroke survivors, whānau (family), and SLTs highlighted that Māori stroke survivors’ needs are not always met. A common finding in Aotearoa New Zealand, replicated in our results, is that SLTs hold good intentions to effectively support Māori (Brewer et al., 2015). However, intentions alone are insufficient in achieving optimal SLT for Māori.

Similarly to prior research, services and supports varied by workplace (Brewer et al., 2015) and notable differences between the North and South Islands of Aotearoa New Zealand were highlighted. As alluded to by one SLT, a lower proportion of Māori live in the South Island (Cormack, 2007). Participants linked the smaller Māori population to a more Westernised culture of South Island SLT services and for one Māori SLT, this influenced expression of Māori identity.

The Western-dominant nature of SLT services was highlighted in previous studies and the current results. The lack of te reo Māori (Māori language) prevented SLTs from fully comprehending stroke survivors’ capabilities (McLellan et al., 2014b) and therapy tasks mismatched with stroke survivor worldviews reduced salience. Furthermore, restricted ability to express Māori identity and Māori ways reduced stroke survivors’ satisfaction with SLT.

Incorporating Māori approaches into SLT presents a solution to challenges of Western dominance. Māori approaches in SLT services, when experienced by participants, were supportive of post-stroke recovery and support previous expressions of need for stroke services to incorporate Māori values (Dyall et al., 2008). Stroke survivors and Māori SLTs in our study hoped for holistic and strengths-based approaches, with inclusion of te ao Māori (the Māori world). Many aspects, namely waiata (song), kapa haka (Māori performing arts), te reo Māori, and atua (Māori gods), have been linked to health and wellbeing (Marques et al., 2021; McLachlan et al., 2021).

Another aspiration of stroke survivors and SLTs was to strengthen relationships between Māori stroke survivors and SLTs. The importance of therapeutic relationships has previously been discussed by Māori people with aphasia and for some, was so influential, it determined participation in SLT (McLellan et al., 2014b).

Whakawhanaungatanga (relationship building) extends beyond rapport building (Lacey et al., 2011). Stroke survivors in our study hoped SLTs would gain deep understandings of their personality and journey.

Māori stroke survivors may benefit from increased autonomy within SLT services. All participant groups believed autonomy was highly valuable, yet stroke survivors and Māori SLTs noted this was an infrequent occurrence. Some stroke survivors used their own strategies which were not provided by SLTs. This may be explained by SLT not always meeting Māori needs or a lack of clear information; both were reported in this study and previous Māori stroke research (McLellan et al., 2014b; Dyall et al., 2008). Although some stroke survivors had their own ideas about recovery one noted, at the research hui (meeting), they still required SLT support. From the perspective of one Māori SLT, seeking input and feedback from Māori stroke survivors could guide services. Affording Māori with autonomy in SLT supports tino rangatiratanga (self-determination, sovereignty, and autonomy), an essential component to fulfilling Te Tiriti o Waitangi obligations (Waitangi Tribunal, 2019).

The importance of a by Māori, for Māori approach was emphasised in our results. One stroke survivor believed Māori SLTs could best support Māori stroke survivors and SLTs working with Māori with aphasia suggested a greater Māori SLT workforce would benefit services (Brewer et al., 2015). A potential method for Māori SLT workforce expansion, highlighted through comments of one non-Māori SLT, is to encourage more Māori students to study SLT at university. Changes appear to have made SLT university programmes more welcoming of Māori students, although further improvements to cultural safety could result in more Māori SLT students. While a by Māori, for Māori approach is key, driving and implementing change should not be the sole responsibility of Māori SLTs, as was the experience of one Māori SLT in our study. Instead, change should be undertaken by all SLTs, reflecting aspirations of Māori and non-Māori SLTs.

During the research hui, one stroke survivor noted there is only so much SLTs can do. This comment suggests, even with good intentions, SLTs are restricted by factors outside their control. Several participants mentioned barriers within healthcare which restricted support for Māori stroke survivors. Despite intentions to shift from provider-centred to patient-centred care in the Western health system (Lutz & Bowers, 2000), non-Māori SLTs described a service-centred system which prioritises time and money over relationships and requires whānau to make accommodations. Historically poor healthcare experiences for Māori were discussed, including how negative experiences have carried into the present. This issue remains unresolved, with poor experiences within Aotearoa New Zealand's public health system still being documented (Graham & Masters-Awatere, 2020).

Improving attitudes and knowledge of the community can improve support for people with stroke-related communication changes (Howe et al., 2008). Stroke survivors, Māori SLTs, and non-Māori SLTs mentioned low public awareness of stroke-related communication changes and some stroke survivors experienced variable community support. A high proportion of people in Aotearoa New Zealand have never heard or read about SLT (Paily, 2020). A low proportion of the general public have awareness (11%) or knowledge (1.5%) of aphasia (McCann et al., 2013). Participants in our study wished to increase public awareness of stroke-related communication changes and SLT services.

## **Worldwide applications**

While the heterogeneity of Indigenous populations must be recognised when attempting to improve Indigenous health outcomes, common challenges and potential common solutions exist in Indigenous health and healthcare (Penn et al., 2017). Similar results between this study and research conducted outside of Aotearoa New Zealand relating to Indigenous or culturally and linguistically diverse people are evident. These are discussed in the following section as they provide important insights into the way forward for SLT services. However, SLT literature with an Indigenous focus is limited, with research predominantly carried out in Australia and Aotearoa New Zealand. Further research is needed to deepen understandings of Indigenous SLT experiences and needs.

Indigenous SLT experiences and post-stroke recovery are influenced by the healthcare system. Barriers within healthcare have been previously reported and reflect findings of this study, including inflexible services (Cochrane et al., 2020; Hersh et al., 2015) and hospital environments that are unwelcoming and ‘Western oppressive’ (Hihi) for Indigenous people (Durey et al., 2016). There is, however, growing awareness of Indigenous health disparities and the importance of healthcare improvements to meet Indigenous needs (Downing & Kowal, 2011). A multilevel approach to change has been described as essential to health care improvement (Ferlie & Shortell, 2001) and aligns with aspirations of Māori and non-Māori SLTs in this study.

SLT service limitations have been reported in research involving Indigenous people with acquired communication changes. Prominently, SLTs experience difficulties engaging with Indigenous clients. Research has highlighted a lack of knowledge and confidence from SLTs in Australia (Hersh et al., 2015). Many SLTs received cultural awareness training but continued to lack knowledge of Indigenous culture and confidence working with Indigenous clients. Māori and non-Māori SLTs in our study similarly expressed low levels of comfort and knowledge regarding engagement with Māori stroke survivors. While most literature focuses on cultural competency or cultural safety training, one Māori SLT’s comment regarding limitations of monocultural experiences, suggests value in experiential learning.

Interpersonal relationships between Indigenous clients, significant others, and SLTs contribute to SLT effectiveness (Cochrane et al., 2020). SLTs in our study found that taking time to build relationships and trust enhanced therapy effectiveness. However, similarly to SLTs working with Indigenous Australian adults (Cochrane et al., 2016), Māori and non-Māori SLTs stated a need for less time pressure. Limitations in therapeutic relationships are particularly prevalent in the post-acute stroke phase. A stroke survivor in our study noted difficulty in finding SLT services following hospital discharge. Prior research reflects this, finding low contact between community SLT services and Indigenous Australian clients (Hersh et al., 2015). A potential approach to support long-term relationships, suggested by a stroke survivor during our research hui, is the continuation of one SLT throughout the therapeutic journey.

The value in community connections for Indigenous people with stroke-related communication changes has been emphasised. In our study, Māori stroke survivors benefited from connections with community groups. Similar connections were important for Aboriginal people with stroke-related communication changes (Armstrong et al., 2012). It was suggested that SLT for Aboriginal people with aphasia may be best offered through

existing community initiatives (Armstrong et al., 2012). Aspirations of a non-Māori SLT, to connect Māori stroke survivors and whānau with other Māori, further emphasises the value in supporting Indigenous community connections.

Culturally appropriate SLT services are also needed. A lack of culturally appropriate assessment and treatment resources is commonly reported for Indigenous adults with acquired communication changes (Brewer et al., 2015; Cochrane et al., 2016; Hersh et al., 2015; McLellan et al., 2014b). This study revealed a Māori SLT aspiration to develop assessments and treatments based on Indigenous knowledge, rather than translating Western assessments and treatments into an Indigenous language. A further barrier is the variable professional development opportunities for SLTs working with Indigenous people or people of minority cultures (Brewer et al., 2015; Cochrane et al., 2016; Hersh et al., 2015). Māori and non-Māori SLTs wanting more educational opportunities and open conversations about cultural competency demonstrates desire to improve practice and a need for further support. SLTs in our study wanted more understanding and engagement with te reo Māori and tikanga (customary values and practices). Similarly, Aboriginal community members expressed the need for training to extend beyond cultural traditions to understanding community values and background (Zeidler, 2011). Although university SLT programmes are incorporating cultural competency education, its implementation has been inconsistent (Perry, 2012). In our study, participants perceived improvements in supports enabling students to work well with Indigenous clients. However, stroke survivors and SLTs had remaining aspirations for non-tokenistic incorporation of cultural competency, increased cultural safety, greater focus on providing Māori examples, and opportunities to apply learning in practice.

Noticeable similarities exist between Australian and Aotearoa New Zealand research, including our results. Based on this evidence, SLT services may benefit Indigenous clients by building strong relationships between therapists, clients, whānau, and communities; striving for flexible, culturally appropriate services; and incorporating Indigenous knowledge and approaches into services. There is also a need to understand the broader context impacting SLT experiences for Indigenous clients, particularly the influence of healthcare systems and their associated barriers.

### **Limitations**

A small sample size allowed for in-depth interpretation of participants' discussions. It is unlikely however that data saturation was reached (Vasileiou et al., 2018); findings present preliminary understandings.

### **Conclusion**

Intentions to change services and improve Indigenous outcomes are evident in SLT. In this study, experiences of suboptimal supports were most prominently characterised by Western dominance, lacking relationships, and minimal autonomy. Aspirations were revealed for improved supports provided to Māori stroke survivors, SLTs, and SLT students; recognition and application of a Māori approach; stronger client-therapist, client-community, and service-community connections; increased autonomy for stroke survivors; and persistent, multilevel change. Findings further highlighted the importance of

a holistic approach and the need to consider the wider implications of the healthcare system, university training programmes, and communities in Indigenous stroke recovery.

We wish to acknowledge the participants for sharing their experiences and aspirations. Our gratitude further extends to the NZSTA kaumātua, and University of Canterbury kaiārahi for their guidance on this research.

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No potential conflict of interest was reported by the authors.

### Disclosure of interest

The authors report no conflict of interest.

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