Speech-Language Pathologists' Practices of Parental Involvement in Paediatric Speech and Language Intervention Funded by the National Disability Insurance Scheme

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Abstract

Background: Rollout of Australia’s National Disability Insurance Scheme (NDIS) has shifted disability service provision towards a marketised structure, where families are seen to gain increased choice and control over how allocated funding is spent on products and services. Australian paediatric speech-language pathologists (SLPs) provide speech and/or language intervention funded by this scheme. The aim of this study was to explore how paediatric SLPs seek to involve parents in speech and/or language intervention funded by the NDIS.

Method: Targeted participants for this study were paediatric SLPs currently practicing in Australia who conduct NDIS-funded speech and/or language intervention. Seventy-two participants completed a survey comprising demographic information, Likert scale statements on a range of practices of parental involvement, and questions regarding their practices of parental involvement with parents of the three most recently seen children whom have access to NDIS funding. Participants were also asked to report their perceived barriers and facilitators regarding parental involvement. Results from the survey were analysed using descriptive statistics and thematic analysis.

Results: The majority of speech-language pathologist indicated a strong commitment to involving parents within speech and language intervention. Three overarching themes of practices facilitating parental involvement were generated from qualitative data: enabling communication and correspondence with parents, utilising service delivery practices to facilitate parental attendance and involvement, and facilitating parents’ implementation of home activities. Barriers were found to arise from speech language pathologist, parent, and workplace setting characteristics. Facilitators were reported to arise from communication and rapport building, utilising a family-friendly model of service delivery, and parent behaviour and characteristics.

Conclusion: Responses indicated that this self-selected sample of Australian SLPs believe they utilise various service delivery practices to facilitate parental involvement within NDIS-funded paediatric speech and language intervention. More research is needed to better understand how marketised disability funding structures such as the NDIS influences SLPs' implementation of family-friendly service delivery models when compared to traditional government block funding programs for disability.

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Introduction

Introduction to the NDIS

History of the NDIS

In 2010, the Productivity Commission was requested by the Australian Government to implement a public inquiry into a "long-term disability care and support scheme" (NDIS, 2020b, History of the NDIS, para. 1). The inquiry and subsequent report released by the National Productivity Commission (Commonwealth of Australia, 2011) investigated the state of disability services across Australia in conjunction with submissions of anecdotal experiences from over 1000 people with disability and the disability sector, concluding that the multi-faceted disability system contained several significant shortfalls. These shortfalls, primarily around underfunding of services, and fragmentation and inefficiency of processes, impacted those seeking services by not offering sufficient choice of services and a lack of guarantee of access to necessary and appropriate supports. The findings from this report led to a gross overhaul of the disability system in Australia through the passing of legislation of the National Disability Insurance Scheme (NDIS) Act 2013. This legislation established both the NDIS and the representative managerial body of the National Disability Insurance Agency (NDIA) in 2013, leading to the Australia-wide rollout of policy to provide individualised support for people with disabilities as well as support for key support stakeholders such as families and carers (NDIS, 2020b). The shift from block funding to the NDIS is seen to be the biggest disability sector reform since the Disability Services Act of 1986 (Kendrick et al., 2017).

The NDIS Framework

The NDIS identifies the population eligible to access an individualised plan to fund equipment and services seen to be reasonable and necessary as people aged 65 years and under who have a permanent and significant disability. A permanent and significant disability as defined by the NDIS is likely to be lifelong and has a substantial impact on the individual's ability to complete everyday activities (NDIS, 2020e).

Early intervention support is also offered through the NDIS, being made available to both children and adults who meet each of the early intervention requirements. The intention of early intervention is to "alleviate the impact of a person's impairment option their functional capacity by providing support at the earliest possible stage" (NDIS, 2020a, Access to the NDIS - Early intervention requirements, para. 1).

Access to the provision of early intervention support through the NDIS is also open to children under 6 years of age whom have a developmental delay. Under the NDIS Act developmental delay is defined as a delay in development which is "attributable to a mental or physical impairment or a combination of mental and physical impairments that results in substantial reduction in functional capacity in one or more of areas of major life activity including self-care, receptive and expressive language, cognitive development, and/or motor development, and results in the need for…interdisciplinary or generic care…that are of extended duration and are individually planned or coordinated" (NDIS, 2020a, Access to the NDIS - Early intervention requirements, para. 21).

For application for provision of support through the NDIS, the above detailed eligibility requirements must be referenced through developmental screening tools such as language or cognitive assessments, of which are preferably norm-referenced to indicate that development differs from those of the same age. Also required is a determination that intervention supports are likely to benefit the individual receiving the support; a requirement arguably more nebulous to fulfil and therefore could be influenced based on the subjective methods used by the assessor. Considerations for fulfilment of this requirement include likely trajectories, time elapsed since diagnoses, and, in some cases, expert opinion and information provided by parents and families.

The NDIA’s philosophy of the NDIS specifies that it is a scheme based on ‘social insurance’ rather than a government welfare initiative, thus incorporating an approach of seeking to minimise costs of support for individuals over time by “investing in people early to build their capacity” in the hopes that these early stage investments will lead to greater life outcomes such as employment and independent living, consequently leading to minimised reliance on government payments and support (NDIS, 2020d, Overview of the NDIS Operational Guideline - About the NDIS, para. 14). There is evidence on the importance of provision of adequate support of children in early childhood (Boyer & Thompson, 2014); (Iversen et al., 2003) and, as such, sound alignment between provision of supports for individuals in early childhood and this social insurance philosophy should lead to bureaucratic structures incorporating swift, streamlined application processes. Some measures for streamlining application processes for children under 7 years of age have been developed such as a list of conditions that deem no further assessment required if they are present (NDIS, 2020c).

The NDIS as a Disability Funding Model

Significant restructuring led the Australian Government to develop the NDIS on disability models seen in similarly socioeconomically structured countries such as Austria and the Netherlands (Da Roit & Le Bihan, 2010). The scheme was consequently based on the concept of individualised funding models and disability support services becoming marketised. This practice of marketisation seen in the core workings of the NDIS seeks primarily to offer a level of choice and control held by individuals seeking disability support services greater than what was previously seen in the Australian Government’s provision of disability services. This mechanism of disability service provision seen in the NDIS lends itself to the idea of economic neoliberalism (Parker Harris et al., 2012) in its goal to allow individuals to hold autonomy over both the purchasing of services they deem beneficial and the selection of those they wish to provide these services, not unlike what is seen in typical free-market capitalism (Esposito & Perez, 2014).

Where there is no market, the role of the institution is to create one (Liboro, 2015). In the use of this neoliberal structure, the NDIA plays a crucial role in developing and maintaining an established foundation of a free market where transactions occur between parties, such as between those seeking disability support services and those providing these services, in ways that align with market forces of supply and demand. Markets such as these, in the context of disability, are seen as a way for those seeking disability services to receive a higher quality of services when compared with direct government-provided services which are seen to be inefficient in their execution of disability service provision (Christiansen, 2017). These structures partially rely on the consequent integration of market competition to theoretically lead providers to deliver higher quality services at a more efficient cost as the view of disability service provision shifts to a culture where those seeking services act as consumers (Parker Harris et al., 2012) who see themselves as purchasing disability services with funds provided by the NDIS.

Allied Health Service Provision Under the NDIS

For service providers to gain and maintain business or employment under the new disability service provision framework introduced through the NDIS, they must respond directly to the marketised structure taking place as has been done in other similar funding models (Wilberforce et al., 2011). Among these providers are the SLPs who have transitioned to provision of allied health services to individuals accessing funds through the NDIS. These individuals have had an increase of their autonomy in the process of seeking services by way of an elevated level of choice and control in services they deem beneficial, and thus their philosophy of their role in disability service provision has shifted from receiver of services to closer to that of a consumer paying for services. As such, increased autonomy given to individuals seeking disability services allows them primarily to seek services that best meet their needs in a personalised framework, but also allows these participants to vote with their funds provided by the NDIS to influence the market conditions to be weighted more equally between themselves and those who provide services (Williams & Dickinson, 2016) such as SLPs. The assumption that NDIS participants are now able to co-develop the market of services has resulted in responses from SLPs to adhere to these requests by aiming to provide services that participants desire and are willing to utilise funding for. In theory, this leads to an increase in demanded services and a drop-off in unwanted services (Hatton et al., 2008).

There has been minimal literature exploring the response of SLPs adapting their business of service provision. Foley et al. (2020) has explored the level of complexity experienced by disability service providers transitioning to the NDIS funding model, identifying that some providers expressed an increased and unanticipated level of bureaucracy that impacted their capacity to optimise participant outcomes. Included in these bureaucratic tasks were the adaptation of new funding and reporting criteria required to remain compliant and receive payments for services provided. The transition to a more business-centric model of service provision also led speech pathologists and other stakeholders to develop and manage skills pertaining to business and administration management rather than simply operating day-to-day as clinicians.

In the transition to the NDIS funding model, participants in Foley et al. (2020) suggested that the goal of service delivery aligning with best practice was a core aspect of the designing of service provision frameworks, although this was challenging to integrate into the funding model and therefore impacted on quality of both intervention provided and subsequent intervention outcomes of NDIS recipients. This shortfall was reported to be part of a larger cultural change of a shift in perception of the costs and value of allied health workers' own work.

This shift in perception changes what disability service providers see as economically worthwhile and viable when providing allied health services to NDIS participants, such as whether the practice of providing satellite services, such as of correspondence outside of clinic, is worthwhile or possible if financial remuneration for the cost of time is not able to be attained. Many components of involving parents in intervention, such as email or phone correspondence or provision and maintenance of home activities, may occur outside of what may be seen by SLPs as consulting time, and therefore out of billable hours. Therefore, this change in culture to primarily provide remunerable services may influence speech-language pathology intervention away from the utilisation of family-friendly and family-centric models due to the risk of this model not supporting financial viability for SLPs working with families of children funded by the NDIS. To the author's knowledge, there have been no studies investigating this hypothesis at the time of writing.

Family-Friendly and Family-Centred Service Delivery Models

Families play a crucial part in the provision of intervention for children with speech and language disorders due to their level of specific knowledge of their child's characteristics and how the communication disorder present influences limitations to activity and participation. The marriage between rich, personalised descriptors of the child from families and data sought by assessments and expert opinion from SLPs can produce a comprehensive representation of the child and family's life from many different points of view. Alongside this, parents are often the primary caretakers and the individuals who spend the most time with their child, thus holding prominent potential as being key facilitators of their child's development (Espe-Sherwindt, 2008). Parents of children with communication difficulties also hold the primary role of accessing early intervention services

(McAllister et al., 2011), an imperative action to ensure a pathway toward their child receiving early intervention.

In the continuum of practice from therapist-centred to family-centred, models of practice utilising parental involvement in intervention are located toward the family-centred care end of the spectrum (McKean et al., 2012). Service delivery seen to be family friendly is defined by primary guidance by the SLP through their expertise while parents are included as implementers and assistants in intervention provision (Bowen & Cupples, 1999; Watts Pappas et al., 2008). In contrast, service delivery based on the family-centred model of practice sees the SLP primarily as a facilitator for discussions around negotiation of the format of intervention, with parents taking the role as a core influencer in the formatting of the intervention process (Watts Pappas & McLeod, 2009). Included in these discussions may be considerations around family's recommendations for frequency and location of intervention, desired level of involvement and roles of the family within intervention, and the structure and goals of intervention. In recent decades, allied health workers have substantially changed the ways in which they work with families in intervention settings, shifting from a therapist-centric model of limited parental involvement to family-friendly and family-centric models of considerable parental involvement (Hanna & Rodger, 2002; Watts Pappas & McLeod, 2009).

It is important to note that despite these contrasts, these models do not allow for clear and all-encompassing binary definitions between the two, and overlap between the models may occur when structuring parental involvement in service delivery. An example of this is the It Takes Two To Talk® Hanen Program for Parents (Pepper & Weitzman, 2004), which has been communicated to be rooted in family-centred practice supported by the program's methodology that parents are seen as the core expert of their children (as supported in Espe-Sherwindt (2008)) as opposed to the SLP. However, aspects of this program align with family-friendly practice as defined by McKean et al. (2012) such as

SLPs maintaining a role as the program's leader and facilitator. Rather than this program being incorrectly defined, it provides an exemplar that family-friendly and family-centric practice is multi-faceted and closely related in the continuum of practice, and aspects from both may be utilised in service delivery where parental involvement takes place.

The primary motivator for SLPs to employ these models is to allow for the provision of service for families to a higher standard by prioritising families as a core part of the intervention framework (Shields et al., 2006). Alongside this, parental involvement has been shown to lead to benefits on children's development and learning (Goodall & Montgomery, 2014). The view of parents acting as a key agent of intervention is a common thread in a wide range of paediatric speech and language interventions in the field of speech-language pathology. In a systematic review exploring clinician-directed versus parent-implemented language intervention strategies for late talkers, DeVeney et al. (2017, p. 294) succinctly communicated the utility of parents being involved in intervention service delivery with their statement that "parental involvement is a key factor in treatment protocols for infants and toddlers to promote skill generalisation and long-term positive outcomes".

Barriers and Areas of Improvement in Parental Involvement

Barriers in Parental Involvement

Barriers to desired levels and intensities of involvement of parents in intervention is a common occurrence due to this framework being a multi-faceted and individualistic aspect of intervention provision. Research has explored barriers in parental involvement as well as potential areas of improvement in the practice of parental involvement in intervention.

SLPs have indicated that parent-related barriers play a significant role in the incongruence between actual parental involvement and desired or intended parental involvement, as seen in Watts Pappas et al. (2008). Sugden et al. (2018) noted that SLPs faced parent-related barriers of parent capability, availability and attendance at sessions, and parents' views of their role in intervention when attempting to train parents on how to provide intervention outside of clinic. Literature has not explored parent-related financial barriers to parental involvement in the context of the NDIS, but as the scheme provides funding to parents for intervention services, it may be the case that this barrier does not play a key role in parental involvement in intervention funded by the NDIS. However, there may be extra funding costs incurred to parents due to situations such as paying for services prior to gaining access to NDIS funding, as well as parents seeking services that go beyond the level of funding provided by the NDIS. Alongside this, there may be other costs incurred to parents in their involvement of intervention such as transportation costs, and thus there may still be the possibility of this barrier influencing parent capabilities of involvement in intervention. Compensatory measures such as accessing services through tele-practice may lessen the impact of these financial situations.

SLPs in Sugden et al. (2018) reported their beliefs and experiences on home practice for children with speech sound disorders (SSDs). These participants detailed that they believed home practice was a crucial aspect of intervention but significant challenges were present that impacted on the success of home practice. These challenges centred around parents exhibiting unsatisfactory levels of completion and administering of intervention that was not in accordance with training of implementation. These findings have also been found in reports from parents of children with other communication disorders (Goodhue et al., 2010; Thomas et al., 2018; Watts Pappas et al., 2016), with parents identifying difficulties around being able to make time for home practice activities within daily schedules and often not remembering to conduct home practice.

Literature on workplace barriers on parental involvement has been minimal. Sugden et al. (2018) has found that barriers imposed by workplaces such as schools significantly impacts parental involvement in intervention as parents may not be able to attend intervention that takes place in school settings at a level conducive with desired levels of parental involvement. Mandak and Light (2018) explored school-based SLPs and their practices of beliefs regarding family-centred services for children with complex communicational needs. Barriers were found to arise primarily from a lack of time and a high level of scheduling challenges. Alongside this, the compromise of schools as a work setting for family-friendly models of intervention due to high caseload size was also reported. Disagreements and limited success of working in a team-based format with parents were also discussed within these participants as a barrier. While these participants identified this as a parent-centric barrier, it may be indicative of family-friendly service delivery not being implemented at a satisfactory level, as opinions of SLPs and families regarding intervention should align within these models (Mandak & Light, 2018).

Barriers arising from SLPs themselves also present as a factor to reducing parental involvement, such as difficulties in feeling confident enough to train parents in providing intervention (Sugden et al., 2018). SLPs have been found to hold dissonance between their beliefs of their practices of parental involvement and the actualities of their practice of parental involvement (Watts Pappas et al., 2008), potentially leading to a reduction in motivation to employ family-centred care at a level desired by parents. If SLPs also do not implement recommended practices of these models of care in a satisfactory manner, such as not allowing for a reasonable level of discussion of roles between themselves and parents, then a barrier to desired parental involvement is created as a result of the working style of the SLP (Shields et al., 2006). Finally, like parents, SLPs are also subject to barriers that arise from not having enough time to allocate toward desired levels of parental involvement (Mandak & Light, 2018).

Areas of Improvement in Parental Involvement

Dyke et al. (2006) explored areas needing to be improved in families and allied health workers involved within an Australian family-centred institution. This study found that areas for improvement centred around allied health workers increasing levels of sharing of information to families, greater involvement of families in general terms, and needing to provide support to families at a higher level than is what is required when simply providing intervention. Alongside these identified areas for improvement, families involved in the study stated the desirability of allied health workers allowing for continuity of care by aiming to ensure stable, long-term relationships between themselves and allied health workers. While the latter point is largely decided by outside forces such as turnover of allied health staff, the former areas of improvement stated may be more probable as they rely primarily on allied health workers' practices of involving parents in intervention.

The area of improvement of an increased sharing of information and communication with families was also supported in the study by Egilson (2011), who explored parents' perspectives of the practices of allied health workers. This study also found that parents wanted allied health workers to allow for increased collaboration between all key stakeholders in the child, including parents and schools or other educational facilities, to alleviate the need for overburdened parents to act as the mediator between those who play a role in the child's life. Parents in this study also suggested specific areas of communication were of elevated importance, such as around how the goals of intervention being provided were transferable into the child's day-to-day life. Parents' desires for the SLP to take initiative of discussing information, especially specialised information held only by the SLP, is seen as a prerequisite to parents being able to compose informed decisions (Egilson, 2011). It is important to note that the populations within this study differ, as participants were parents of children with physical disabilities rather than communication disorders or other disabilities relevant to speech and/or language intervention.

Parents' Perceptions of Their Involvement in Speech and Language Intervention

As some speech-pathologists shift their practices toward family-friendly and family-centric models of care, it is important for them to consider how parents view their and the SLP's roles in intervention, as well as to have conscious thought about how parents prefer to be integrated in the intervention process. Literature has suggested that parents initially assume the role of advocacy for their child, consulting with the SLP to communicate concerns of the child's difficulties, seeking advice, and discussing progress seen through the intervention process (Glogowska & Campbell, 2004; McAllister et al., 2001). Parents take on this role when they decide to seek support for their child's difficulties, whether that be in seeking the advice or service provision from an SLP directly (Glogowska & Campbell, 2004), or, in the context of the NDIS, enquiring about or applying for funding of support through the scheme, and suggesting to a NDIA consultant that funding for speech-language pathology services should be considered as part of the support plan (Barr et al., 2020).

Parents being advocates within service delivery is crucial in the stages prior to intervention is imperative for services to occur, but once intervention starts to take place, parents feel uncertain about their role, as they consider the SLP the fixer of problems in the intervention process (Carroll, 2010; Watts Pappas et al., 2016). To this effect, parents may aim to adopt non-intrusive roles of observer within sessions and implementer of home activities outside of sessions, leaving the spearheading of the intervention process to the SLP (Watts Pappas et al., 2016). The roles of parents assumed within service delivery are dynamic and individualistic. Several pieces of recent literature have stated that parents' beliefs regarding their role in early speech and language intervention, as well as their expectations held on their level of involvement, change throughout the course of their time in accessing intervention services (Davies et al., 2017; Watts Pappas et al., 2016).

SLPs should consider these perceptions of hierarchy parents may hold in their discussions with parents regarding the setting of roles in intervention. If discussion around defined parent and SLP roles in their child's intervention takes place, this may incidentally prompt further discussion and solidification of desired roles. In support of this, Sugden et al. (2019) found that integrating families in the planning process of intervention may assist speech-language therapists to identify parents' expectations of roles and adapt to these expectations. To do so may increase the level of parents' satisfaction of the intervention services as well as to increase engagement with services (Glogowska & Campbell, 2004; Lyons et al., 2010).

It may be assumed that allowing for parents to hold elevated levels of control over the format of intervention is preferred by parents, and therefore family-centric models being more desirable. However, literature has supported the notion that parents prefer the aspect of speech-pathologists maintaining a primary role seen in family-friendly models of practice (Carroll, 2010; Lyons et al., 2010; Ruggero et al., 2012). Ruggero et al. (2012) explored Australian parents' views on paediatric speech pathology delivery, identifying that parental involvement in discussions around goal-setting did not substantially influence the level of satisfaction parents had with service delivery. While none of the parents involved in a study by Watts Pappas et al. (2016) were provided with practices aligning with family-centred care, all parents indicated they were satisfied with the level in which they were involved in the service received. These parents also believed that their involvement in intervention provision was important, though preferred the SLP to have the responsibility for goal-setting and formatting of intervention activities for their child. Parents did not see their lack of involvement in these aspects of intervention disempowering, seeing their level of involvement as "the most efficient way to utilise a finite service" (Watts Pappas et al., 2016, p. 236). This study suggests that these outcomes may have been due to parents depending on the SLP to give expert advice. These views parents hold may be influenced by service delivery typically of the SLP being the primary decision maker. Parents in these studies may not have been engaged in service delivery utilising the family-centred model of care and therefore may not be fully aware of if and how they can hold a primary role in the formatting of intervention, a phenomenon seen in McWilliam et al. (2000). This suggests that clinicians have a responsibility to discuss and explore the breadth of possibilities in parental involvement in service delivery in order to successfully allow for the most appropriate adaptation of service delivery to each individual family (Carroll, 2010).

Parents have the potential to expand the effectiveness of intervention if they are confidently and appropriately supported by SLPs to be put into a more active role in intervention. Lawler et al. (2013) suggests that the level of effectiveness in intervention administered by parents can rival that of clinicians for children with SSD, and Roberts and Kaiser (2011) states that parents can have the capabilities to be taught how to utilise strategies to support children's development in speech and language. Davies et al. (2017) has identified that some parents assume the role of implementor and adaptors of intervention activities following SLPs enabling parents to assume new roles as interveners. Furthermore, it has been reported by Freuler et al. (2014) that parents of children accessing early intervention services identify seeing personal relationships with support and allied health workers as ones which can validate their concerns and facilitate feelings of support, supporting the notion that early practitioners can also act as sources of support for parents (Kruijsen-Terpstra et al., 2014). These findings further support the notion that there are benefits to SLPs involving and supporting parents in intervention, and opening communication with parents around their value in being involved in the intervention process and engaging in discussions with parents around participating more actively in consideration with barriers to involvement that may be present should be considered.

Parental Involvement in Intervention for Speech Sound Disorders

Provision of intervention for children with SSDs is a core clinical role in the work of paediatric SLPs. Surveys indicate that children with SSDs comprise nearly half of a typical caseload in Australia (McLeod & Baker, 2014). While SLPs typically strive to administer evidence-based practice for this demographic of clients on their caseload, there can be significant barriers in place to achieving this goal, primarily through the challenge of delivering the empirically tested intensity levels reported by researchers in intervention for SSDs (Kaderavek & Justice, 2010). The high level of demand on time and resources required to implement the intensity levels for SSDs may be infeasible in service delivery. Studies exploring service delivery of Australian SLPs working with children with SSD have found significant differences between level of intensities in the external evidence base of phonology-based speech sound disorder intervention and actual deliverance of intervention were found (McLeod & Baker, 2014; Sugden et al., 2018). These two studies illustrate the misalignment between intervention demonstrated effective in research studies and day-to-day clinical practice in the provision of intervention for speech-sound disorders.

Barriers such as time, capacity, and access to research impact on implementation of evidence-based practice in clinical settings (Hoffman et al., 2013). As SLPs face these barriers in service delivery, facilitating parental involvement is a reasonable way to extend time spent on intervention activities by allowing for intervention to occur outside of clinic. Literature suggests that SLPs may opt to incorporate parents in implementation of intervention to mitigate service delivery barriers that limit the potential amount of intervention able to be delivered (Joffe & Pring, 2008). This suggestion has been supported by Sugden et al. (2018), finding that SLPs have been reported to seek to involve parents in intervention for SSDs do so to allow for intervention to take place outside of sessions, as well as to improve outcomes of intervention and empower or educate families. Parental involvement can also allow for children with SSDs to be exposed to reinforcement across different communication partners and contexts, which literature has found to benefit these children and increase the effectiveness of service delivery (Allen, 2013; Lawler et al., 2013).

The majority of intervention for SSDs incorporates some form of parental involvement (Watts Pappas & McLeod, 2009). While this is the case, there have been some studies on interventions where parental involvement has not been mentioned (e.g., Forrest et al. (1997) for the minimum pair approach, Gierut and Champion (2000) for the maximal pair approach) which demonstrate these interventions to be effective. It can then be assumed that some intervention strategies can follow a therapist-centric model of intervention and still lead to positive outcomes. Similar findings can be found in studies for some specific interventions that follow a service delivery framework of parents acting primarily in the implementation of the intervention, with the SLP holding the role over planning and management of service delivery, as well as administering intervention within clinical settings. These studies have explored the constraint-based nonlinear approach (Bernhardt et al., 2006) and the cycles approach (Hodson, 2006), both of which can be considered as a model of intervention appropriate for this service delivery framework. It should be noted that interventions in these studies may have seen more parental involvement than discussed in the literature.

Interventions for SSDs that involve parents in service planning alongside service delivery as implementers of intervention utilise components of family-friendly and family-centric models of care. In interventions that tend towards family-friendly approaches, the SLP retains the role of decision-making regarding intervention practices, however parents are sought to be included through correspondence and parent training. A primary example of a family-friendly intervention for SSDs is PROMPT (Prompts for Restructuring Oral Motor Targets; Hayden, 2006), where family members are encouraged to discuss priorities regarding intervention and participate in implementation of intervention while the SLP utilises their expert knowledge to curate intervention targets and the schedule of the program. Other intervention approaches that follow family-friendly methodologies have been identified as the core vocabulary approach (Dodd et al., 2006) and PACT (Parents and Children Together; Bowen & Cupples, 2006). The PACT approach is also seen to be the intervention approach that follows a family-centric model the closest, however still largely falls under the family-friendly model due to not completely following families' lead (Watts Pappas & McLeod, 2009).

There has been a significant variation identified in SLPs reporting parental involvement in intervention sessions for SSDs in recent years. Watts Pappas et al. (2008) stated that only 35% of Australian SLPs reported parental involvement in intervention sessions. This finding contrasts with findings seen in other similar studies, namely 60% of participants reporting to involve parents seen in Oliveira et al. (2015), 75% of participants reporting to involve parents often or always in Joffe and Pring (2008), and 89% of participants reporting parental involvement in Sugden et al. (2018). These studies used a self-reported survey methodology framework, and thus results are prone to self-reporting biases and inaccuracies. There were also differences in the wording between the relevant survey questions between studies which may have influenced participant responses. Assuming the increasing trend of parental involvement as seen in the contrast of reports of parental involvement between Watts Pappas et al. (2008) and Sugden et al. (2018) is valid, it may signify the presence of changes in service delivery for phonology-based intervention that favour parental involvement may have occurred throughout the 10-year difference between these studies. A marked change in service delivery in this field of intervention has been the rollout of the NDIS which may have had a significant influence on fundamental aspects of workplace setting and day-to-day speech-language pathology practice, and parent autonomy over service delivery planning, although this has not been explored through literature. There may also be recent changes of opinions of parental involvement from the point of view of the parents themselves, with Watts Pappas et al. (2016) identifying that parents of children with SSDs view their involvement as vital in intervention. Sugden et al. (2018) discusses other potential influences, including an increase in SLPs' awareness and use of the International Classification of Functioning Disability and Health Children and Youth Version (ICF-CY; World Health Organisation, 2007), a classification that focuses on holistic, family-friendly management of children in health settings.

Literature has identified that there is an association between characteristics of SLPs and their practice of parental involvement in children with SSDs (Joffe & Pring, 2008; Oliveira et al., 2015; To et al., 2012). A study by Watts Pappas et al. (2008) found that SLPs who are more experienced were reportedly less likely to give parents the opportunity to make final decisions about goals for their child's intervention. Sugden et al. (2018) identified that more experienced SLPs report a wider variation of parent training methods and training in more areas of intervention. This may be due to clinical skills learned throughout later stages of SLP's careers, as literature has shown that newly qualified SLPs find more difficulty in translating and applying their theoretical knowledge to complex clinical situations compared to more experienced clinicians (Roulstone, 2012). SLPs working in educational settings such as schools were seen to be not as likely to engage in parent training and parent attendance of sessions (Sugden et al., 2018; Tambyraja et al., 2017). The reason for this may be that school-based SLPs have been reported to have fewer interactions with parents than SLPs who work in private practice or hospitals, as well as considerable variations in the frequency of occurrence (Tambyraja et al., 2017; Watts Pappas et al., 2008).

Research has noted disparities between the expectations held by parents and by SLPs regarding service delivery for children with SSDs. Perceptions SLPs hold on how parents and families view parental involvement was explored in Sugden et al. (2018), finding that while the vast majority of SLP participants reported to involve parents in intervention, only approximately half reported to agree that families are happy to be involved in intervention. Alongside this, the vast majority agreed that home practice is a vital component of intervention, while fewer than half were seen to believe that families think home practice is a vital component of intervention. Parents have been found to view their involvement as important within service delivery of intervention, but felt that the SLP's role was to work with the child within sessions (Watts Pappas et al., 2016). This aligns with findings in literature for other areas of intervention for communication disorders where parents view themselves as supporting intervention through implementation of home activities while the SLP remains the primary decision maker (Carroll, 2010).

Parental Involvement in Home Practice for Speech Sound Disorders

Home practice has been established in the literature as the primary strategy SLPs utilise in involving parents in intervention for this field (Watts Pappas et al., 2008). Research on home program use as an aspect of parental involvement in intervention for SSDs has supported the notion that children can significantly improve from parent-implemented interventions at a level comparable to that of intervention provided by an SLP (Eiserman et al., 1990). Studies have shown that Australian SLPs commonly involve parents in intervention service delivery for phonology-based SSDs, with Sugden et al. (2018) reporting that that delivery of home practice was the most frequent method of involving parents (at 98.7%). This study also detailed specific information of typical home activities for SSDs administered by parents, identifying that home practice activities were generally reported to be activities that were easy to set up and administer. Parent training for these home practice activities was reported to be typically done by direct observation and guidance of the SLP.

Research has explored parents' experiences of completing home programs in intervention for communication disorders. Sugden et al. (2019) investigated the experiences parents have when completing home practice for their child's speech sound disorder, finding that parents generally regard these experiences as positive and help develop their abilities and curate expectations regarding the completion of home practice. Parents were able to modify the implementation of home practice activities to best adapt to suit the nature of their family, an undertaking argued to require a reasonable level of confidence from the parents. The finding of parents engaging in adaption for home practice has been found in other literature detailing parents' experiences in completing home practice for communication disorders (Davies et al., 2017; Goodhue et al., 2010).

SLPs who work in educational settings such as schools are much less likely to see and engage with parents of children on their caseloads when compared with SLPs who work in private practice and clinical settings (Watts Pappas et al., 2008). As a result of this, sending home practice activities to the parents is a convenient way to facilitate parental involvement due to it not requiring face-to-face contact with the parents. Research has explored this area, finding that while employing this method of parental involvement is common, it occurs far less frequently than seen in the general population of SLPs reported by Sugden et al. (2018). A study by Tambyraja et al. (2017) examined intervention notes from 73 school-based SLPs detailing instances of communication with parents of children with speech and/or language disorders. It was found that the most common method of parental involvement was through sending of homework activities, occurring around a quarter of the time. Findings from a survey of American SLPs by Tambyraja (2020) indicated that the rate of which SLPs follow up with parents on completion of homework activities is considerably less than initial communication regarding homework activities. There is a clear discrepancy illustrated in the frequency of provision of home activities found between findings in Tambyraja et al. (2017) and findings in Sugden et al. (2018). These two studies differed in several ways, including regional differences and range of work settings investigated (the former investigating school-based SLP practice in the United States, the latter investigating SLP practice across various work settings in Australia). Differences in study methodologies was also identified. The study by Sugden et al. (2018) utilised a survey framework, and thus is subject to self-reporting bias, contrastive with Tambyraja et al. (2017) which investigated direct observational data. While this bias is not to be ignored, it can be argued that the workplace barriers impacting on frequency and accessibility of face-to-face contact with parents may be a primary influencer of provision and follow-up of home practice activities.

It has been stated in research that comprehensive and ongoing training is a crucial aspect for successful parent-delivered home practice interventions (Tosh et al., 2017). Reports in the literature exploring parents being trained to deliver intervention for their child with SSDs have generally supported the notion that parent-implementation of intervention for SSDs can be beneficial. Findings in Sugden et al. (2020) identified that parent participants were able to competently deliver multiple opposition interventions, an intervention strategy for phonological difficulties, when given comprehensive and continuous training and support for providing home intervention for this type of speech-sound disorder intervention. A lack of inclusion of such comprehensive training may be a part of the reason why perceived barriers of parents not feeling as though they hold the skills or motivation to conduct home practice activities exist (Melvin et al., 2020; Sugden et al., 2020).

It has been concluded by Watts Pappas et al. (2016) that parents' expectations and willingness to be involved in intervention may be influenced by the nature of disability their child holds. As such, parents may be more willing and able to engage with home practice activities for early intervention for SSDs due to intervention duration typically being short-term compared to children with lifelong disabilities. In their exploration of parents' experiences of completing home programs, Sugden et al. (2019) suggested that parents engaging in home practice was influenced by other key individual factors outside of the nature of their child's disability. The challenges parents have been reported to face, these being finding both the confidence to attempt home practice the time to complete these tasks, are likely to be present in the experience of administering home practice activities regardless of their child's disability. These barriers pose risks to how successfully and how often home practice is attempted by parents, leading to the potential loss of positive outcomes associated with intervention intensity and completion of home activities (Allen, 2013; Tosh et al., 2017). These difficulties may be able to be mitigated by SLPs' support through the use of family-friendly and family-centred approaches to intervention provision, as these approaches aim to view each family as individualistic and thus the responsibility and subsequent burden on families that home practice can bring can be ameliorated on a case-by-case basis. To the author's knowledge, there have been no studies comparing parents' experiences of completing home programs across communication disorders.

Parental Involvement in intervention for Language Disorders

Providing intervention for children with language difficulties, especially in early intervention settings, is crucial to mitigating the risks of academic and social difficulties that arise in later stages of life from language disorders (Dockrell et al., 2011; Heidlage et al., 2020). As satisfactory language development provides a foundation for literacy skill development, delays in language development skills can lead to increased risk of difficulties relating to literacy skills (Dickinson et al., 2010), which can have a significant impact on functioning and quality of life in later stages of children's lives (Skibbe et al., 2008). Language difficulties may also increase the risk of the child having delayed social competence and communication skills relative to their peers (Cohen & Mendez, 2009).

SLPs have a duty to provide service delivery of language intervention that incorporates principles of best practice. Parents play a crucial and primary role in children's language development (Landry et al., 2000; Tamis-LeMonda et al., 2001). Literature supports the notion that children learn language effectively and efficiently when they engage with adults to facilitate language learning (Schreibman et al., 2015). As such, there is substantial merit to service delivery that incorporates family-friendly and family-centric philosophies in language intervention.

Recent shifts in practice within speech-language pathology service provision toward the utilisation of family-friendly and family-centric models of care has led to embracement of parental involvement in intervention for language disorders. Service delivery approaches involving parents are more commonly seen in intervention with children under 5 years of age, transitioning toward working more with teachers following children starting school (McCartney et al., 2015; McKean et al., 2012). Parental involvement in early language intervention is beneficial in its ability to provide a continuation of care and support for development of language skills, alongside enabling transference of skills learned in SLP-led intervention from within clinic settings to environments such as the home (Watts Pappas & McLeod, 2009).

Strengthening parent skills for teaching language in parent-child interactions is a common recommendation in service delivery for language intervention for young children with and without intellectual disability (Roberts & Kaiser, 2011). Involvement of parents in service delivery is seen to incorporate aspects from either or both of the models of family-friendly practice or family-centred practice. Aspects of the former model revolve around establishing the SLP as primarily dictating the format and content of intervention, contrasting with aspects of the latter model which are based on the SLP acting more as a facilitator of intervention, deferring control over the general format and content of the intervention to the family (McKean et al., 2012). In the context of language intervention, parents involved in service delivery utilising either or a combination of both models will have a role of implementing intervention strategies following a period of the SLP training the parent on how to use these strategies.

Studies of the effect of parent training have investigated parent implementation of intervention strategies for language disorders. In a multiple-probe study design involving four parents, Delaney and Kaiser (2001) found that all parents involved were able to learn strategies around being responsive to their preschool-aged child’s communication and generalise these strategies to interactions at home, leading to positive outcomes in language performance such as average mean length of utterance. Maintenance for changes in parent behaviour were also noted 6 months following the individual sessions parents attended. A study with a similar design by Kashinath et al. (2006) exploring parents of children with autism spectrum disorders found positive outcomes of parent training similar to that of Delaney and Kaiser (2001), reporting that parents elevated their use of the language strategies taught to them. Findings from these studies suggest that increased use of language intervention strategies implemented by parents can result from SLPs teaching these strategies to parents.

The effect of parent implementation of specific intervention strategies on language development has also been explored in literature. An example of a specific parent-implemented program is Enhanced Milieu Teaching (EMT; Kaiser et al., 1993), a conversation-based intervention where children’s interests and initiations are used as opportunities to model and expand language in everyday contexts. Roberts and Kaiser (2012) investigated the impact of this intervention on language development in children aged between 24 and 42 months with a language disorder. This study found that implementation of this intervention by parents, who participated in 28 parent training sessions over a 3-month period, was effective for improving language outcomes for children in the study as seen by significantly improved PLS-4 Total and Expressive Communication scores. An expansion of this intervention, JASPER-EMT (with JASPER standing for Joint Attention, Symbolic Play, Engagement and Regulation), has been designed to increase language use in minimally verbal children with autism spectrum disorder. This intervention was the subject of a study by Shire et al. (2018) where parents of 5-to-8 year old children with autism spectrum disorder were trained in the use of intervention and modelling strategies such as establishing play routines, and imitation and modelling of language. Results found that when parents utilised the strategies in 70% of opportunities, children in this study showed a significant increase in their use of comments in comparison to parents who used strategies less often. These two studies add to the evidence that parent-implementation of conversation-based intervention can have positive impacts on language use and development in certain populations of children.

The It Takes Two To Talk® Hanen Program for Parents (Pepper & Weitzman, 2004) is a family-centric intervention program utilised by SLPs within service delivery. This program is designed for parents of children aged up to and including 5 years who have been identified to have language difficulties and uses an indirect service delivery model where the Hanen-certified SLP holds the role of teaching parents of children with language disorders to facilitate language development in naturalistic settings. Parents are taught to utilise child-centred, intervention-promoting, and language-modelling strategies with the aim that parent behaviours are able to influence their child's language development in early language intervention (Watts Pappas & McLeod, 2009). Literature has found that parent-focused language intervention utilising this program has had significant effects on early conversational skills and vocabulary acquisition in children with cognitive and developmental disorders (Girolametto et al., 1998). Similar findings have been seen in studies of late-talking toddlers (Girolametto et al., 1996) and children with language disorders (Baxendale & Hesketh, 2003). Overall, research on this program has found that it can be effective in promoting development of children's language skills, adding support that intervention programs that utilise family-friendly and family-centred care and parental involvement can lead to positive outcomes of language development in young children.

Several systematic reviews and meta-analyses have discussed the literature of parents as agents of intervention for young children with language difficulties. A systematic review by Roberts and Kaiser (2011) investigated the effect of parent-implemented language interventions utilised in play and routine settings on language skills of children aged between 18 and 60 months who also had primary and/or secondary language impairments. Results indicated that parent-implemented language interventions can be seen as an effective strategy for developing expressive and receptive vocabulary relative to a no-treatment comparison. Additionally, there were significant effects seen in parental responsiveness and parental language-facilitating behaviour. Details on methods of parent training, parent implementation of language strategies, and fidelity measurements on parent training were limited across the 18 studies included in this review.

A more recent meta-analysis by Heidlage et al. (2020) investigating this field of research sought to expand on these previous systematic reviews in several ways. These included an addition of literature exploring parent-implemented language interventions for children at-risk for language impairment due to low socio-economic status, only including literature that were randomised controlled trials, and assessing the effect of parent-implemented language intervention in two common contexts of shared book reading and play and routines. The outcomes presented in this meta-analysis continued to support the previously discussed findings of a positive relationship between parent-implemented intervention and child expressive language development for children with primary language impairment. These findings were also seen to extend both to children at-risk for language impairment due to low socio-economic status and for children at-risk of ASD, however effects for the latter group were relatively smaller than for other populations. Limitations of the individual studies included within this meta-analysis primarily centred on limited descriptions of parent training procedures and parent implementation such as information on prescribed and implemented dosage. Overall, while this meta-analysis generally supports the use of parent implementation of language intervention for this demographic of children, the limitations discussed compromise both the idea to conclude findings and to implement intervention prescribed from these studies.

Aim of Study

Few studies on the NDIS have looked at the way the scheme has influenced the realm of allied health, with the majority being predictive studies on the potential impact NDIS may have had (e.g., Green and Mears (2014), Miller and Hayward (2017)), and therefore not much is known in this area directly relevant to Australian SLP service delivery. To the author's knowledge, there have been no studies published on SLP practice of parental involvement in intervention of clients funded through the NDIS.

The NDIS is a complex, multi-faceted aspect of contemporary allied health service delivery in Australia, and therefore for a study to feasibly tackle the impacts NDIS has had, limitations on the scope must be applied. This thesis will therefore focus on the SLP practices of parental involvement in speech and language intervention. These practices being core aspects of SLP family-friendly service delivery explored in published literature (such as in Watts Pappas et al. (2008), Sugden et al. (2018)) will allow for the possibility of comparing SLPs' report of data of parental involvement in paediatric speech and language intervention under the NDIS to what is currently known about typical practice in these domains.

The aim of this study is therefore to explore how SLPs involve parents in paediatric speech and/or language intervention funded by the NDIS.

Research Questions

1. Do paediatric SLPs working with children whose speech and/or language intervention is funded by the NDIS believe they utilise practices that aim to facilitate parental involvement?
2. Are there any characteristics of SLPs that influence if or how they facilitate parental involvement in speech and/or language intervention funded by the NDIS?
3. What specific practices do paediatric SLPs utilise to facilitate parental involvement in speech and/or language intervention funded by the NDIS?
4. Do paediatric SLPs believe there to be barriers that prevent them from further involving parents within paediatric, NDIS-funded speech and/or language intervention, and, if so, what are the barriers?
5. Do paediatric SLPs believe there to be facilitators that assist them in further involving parents within paediatric, NDIS-funded speech and/or language intervention, and, if so, what are the facilitators?

Method

Ethical Considerations

Ethics approval for this study was sought and attained from the Human Ethics Committee at the University of Canterbury in May and June of 2020 (Appendix 1). An ethics amendment was requested in August 2020 and approved in September 2020 (Appendix 2) to allow for survey distribution through relevant Facebook groups and professional networks.

Information regarding ethical considerations and participant consent were provided on the initial page of the survey. Participants were made known that questions pertaining to specific clients were to be asked in general terms, and that no confidential information relating to these clients would be asked to be provided.

Consent to participate in this study was expressed to be voluntary, with consent deemed to be given through submission of responses at the end of the online survey. Participants not submitting survey responses was seen as withdrawal from participating in the study, and thus responses not submitted were not collected as part of the data set. Due to the survey not collecting any identifiable information to be paired with survey data, withdrawal was not possible following submission.

An inducement was used to support recruitment activities. This involved a random prize draw for one of 5 $50 gift vouchers. Anonymity of participants' responses was preserved by using a link to a separate survey for participants to enter the prize draw. Participants were invited to enter their contact details to enter in a second survey used for the random prize draw alongside participant indications of consent for further research in the study and requests for results arising from the survey following completion of the thesis.

Survey Instrument

The online, web-based survey instrument was created in partial adaptation from surveys utilised in Watts Pappas et al. (2008) and Newbury et al. (2020) using the Qualtrics® survey creation platform hosted by the University of Canterbury. Qualtrics® was chosen in accordance with its comprehensive survey construction features and ease of distribution of the survey. See Appendix 3 for a full copy of the survey information sheet and survey questions. The following section form brief summaries of the survey sections and example questions.

Section One: Demographics

The first section asked questions relating to demographic information of participants' location, setting, and weekly hours of work and description of caseload. Participants were asked to identify the percentage of children on their caseload funded by the NDIS, as well as the percentage of children on their caseload who come from culturally and linguistically diverse backgrounds. Participants were also asked on how long they have worked with children funded by the NDIS. Children were defined in the survey as being aged from 0 to 17 years.

Section Two: Likert Scale Statements

The second section comprised a 5-point Likert scale of 8 statements pertaining to participants' involvement of parents or caregivers in children's speech and/or language intervention funded by the NDIS. Options ranged from strongly disagree to strongly agree, with an option indicating the question is not applicable also being included. These statements were generated from a range of areas of family-friendly practice explored in Watts Pappas et al. (2008). Statements referred to participants' facilitation of involvement of parents/caregivers in areas of parent/caregiver presence and involvement within intervention sessions, setting and following up of home activities, allowing parents/caregivers to be involved in goal-setting discussions, enabling correspondence between both parties such as through email and phone communication outside of clinic consultations, and allowing for discussion during consultations of intervention details such as the session's goals.

Section three: Questions Regarding 1-3 Most Recent NDIS-Funded Clients on Caseload

The instrument's third section was amended in week 3 of 10 of the data collection process. Initially, this section comprised 12 questions for each of 3 children for a total of 36 questions. Questions pertaining to children 2 and 3 were optional as participants may only have worked with 1 child whose speech and/or language intervention was funded by the NDIS. A review of response in the second week of data collection found that there were a high number of abandoned survey responses at this section within this timeframe. Only submitted responses were able to be used for data analysis due to the wording of the consent statements at the start of the survey. Therefore, to increase the proportion of completed survey responses questions pertaining to children 2 and 3, questions for these children were removed. This reduced the advertised time commitment to complete the survey from 15 - 30 to 10 - 15 minutes. No other changes were made to the survey once data collection was initiated.

In this third section, the first 3 questions were multiple choice and asked for demographic information of the child, including gender, age of the child at the start of intervention, and communication disorder/s and relevant disabilities of the child. Questions 4 and 5 asked the participant to give information relating to the speech and/or language intervention/s the participant has conducted with this child. Selection choices given for these questions were deemed by the author to be common interventions. Subsequent selection choices of 'other', 'unsure', and 'I did not provide intervention for SSDs/language disorders for this child' were given in these questions. Questions 7 through 12 comprised open-ended questions asking participants to describe strategies used to involve parents/caregivers in speech and/or language intervention for this child. Questions 7 to 10 were directly related to statements in the Likert scale statements provided in section 2. Questions 11 and 12 asked participants to describe barriers that may have impacted on the level of parent/caregiver involvement, as well as other factors that may have influenced more parent/caregiver involvement to take place.

Quality-control measures were utilised to best minimise factors that may have impacted on validity and quality of responses. Scrutiny of the instrument's content by the research team and peers was done for survey information, questions, and Likert scale statements to best have neutral language to minimise led or influenced responses, and wording content was simplified as needed to reduce the risk of participant confusion. An accurate illustration of survey completion time, as well as efforts taken to make the survey concise and contain a variety of question formats were implemented to minimise participant fatigue while completing the survey. Following this, the survey was piloted with the research team's colleagues to determine any further improvements. These improvements included changing the wording of various questions and amending the survey completion time.

Participants and Survey Distribution and Response Rate

Targeted participants for this study were SLPs currently practicing in Australia who conduct speech and/or language intervention with children funded by the NDIS. Distribution of the survey instrument to this target population took place through 3 distinct avenues. The survey was primarily advertised in Speech Pathology Australia's monthly eNewsletter as a clickable survey link with a brief summary of the study, advertisement in relevant Facebook groups, and distribution of the survey link across the research team's professional networks. Application of advertising the survey through Speech Pathology Australia's eNewsletter took place in July 2020, and advertisement took place on a monthly basis in the months of August, September, and October 2020. Speech Pathology Australia's eNewsletter was sent out at the start of the second week of each month.

A summary of the study and a link to the survey were distributed to two relevant Facebook groups chosen: ‘NDIS Speech Pathology’ and ‘Developmental Language Disorder (DLD) Australia’, where information and a link to the survey were regularly distributed via Facebook posts throughout September and October. The information and survey link were also distributed to suitable participants within the research team’s professional network.

Exact numbers of currently practising paediatric SLPs whom are also registered as NDIS providers were not able to be found, and thus the percentage of participants engaged within the target demographic were not able to be determined.

Prize Draw Survey

A link to the prize draw survey, also using the Qualtrics® survey creation platform hosted by the University of Canterbury, was given to participants in a section following submission of the survey. Participants were made aware through information at the start of this instrument that contact details provided were collected in a way that did not allow for a relationship to be drawn between their contact details and the information they submitted in the primary survey. This was made possible through contact information being solely submitted through this separate instrument.

This survey collected participants’ details to allow for fulfilment of three goals: to conduct a random prize draw used to distribute the study’s inducements, for participants to indicate consent to being contacted to participate in further potential research, and for participants to indicate their interest in receiving a copy of the results of the study following completion of the thesis. See Appendix 4 for the complete prize draw survey.

Data and Statistical Analysis

Data from the survey was downloaded from Qualtrics as a Microsoft Office Excel file (Microsoft Corporation, 2018). This file was then converted to be compatible with Jamovi (The Jamovi Project, 2020) for quantitative analysis and NVIVO (QSR International, 2020) for qualitative analysis. Descriptive statistics was used for quantitative analysis to explore and detail features and characteristics of the closed responses collected. The responses were analysed by tallying frequencies of each response category and converting these frequencies to percentages.

Participants were asked to rate their level of agreement of the above statements in regards to the NDIS-funded paediatric speech and language intervention they have conducted. At the time of data collection, it was likely that some intervention sessions were being conducted by way of tele-health rather than in-person due to the COVID-19 pandemic. This pandemic appeared to heavily alter the ways in which service delivery was implemented due to nation-wide lockdowns and encouragement of social distancing, leading to other service delivery practice methodologies to be utilised such as through tele-practice (Law et al., 2021). Throughout the time of survey data collection, Melbourne was under a strict lockdown that barred face-to-face consultations. Other areas within Australia were not under lockdown within this time. To minimise this influencing results, participants were asked to respond to these statements in relation to the context in which intervention was typically conducted, such as through face-to-face consultations.

Responses to the Likert scale statements were tallied and converted to percentages. To determine an average score of participants' use of practices relating to family-friendly service delivery models, Likert scale statements were labelled a number from 1 to 5, with strongly disagree labelled as 1 and strongly agree labelled as 5. Not applicable answers were excluded from calculations.

Selected demographic characteristics of participants were examined for correlation with each Likert scale response. The chosen demographic characteristics to be assessed for correlation were years provided intervention for clients with speech and/or language disorders as an SLP, percentage of clients with NDIS funding on participants' current caseload, percentage of clients who come from culturally and linguistically diverse backgrounds on participants' current caseload, work setting selected as private practice, and work setting selected as the Department of Education and Child Development. These characteristics were chosen as they were the most relevant to parental involvement (Joffe & Pring, 2008; Oliveira et al., 2015; Roulstone, 2012; Sugden et al., 2018; Tambyraja et al., 2017; To et al., 2012; Watts Pappas et al., 2008).

To determine statistically significant relationships between chosen characteristics and each Likert scale response, a range of statistical tests were used. For independent variables in which data was continuous, the Spearman Coefficient (indicated by the symbol r_s) was used. For independent variables where data was categorical with two different populations, Mann-Whitney U tests (indicated by the symbol U) were used. As the dependant variables (i.e., each Likert scale question) were not normally distributed, data analysis only used statistical tests for non-parametric data. The significance level (α) was chosen to be 0.05, however as 40 statistical tests were conducted, a Bonferroni adjustment was used, giving a significance level of $p = 0.00128$. This adjustment was implemented in order to minimise the potential for a type I error to occur, as a high number of statistical tests were conducted (Armstrong, 2014).

Open responses in the survey's third section were analysed using the thematic analysis framework as suggested in Braun and Clarke (2006). This method of qualitative analysis is centred around identifying and reporting on themes generated from the data, where themes generated aim to group similar codes, or labels of meaningful content found within data, to best describe findings from the data that facilitated the researcher to answer the research question proposed. Due to each of the six open-response questions in the third section of the survey targeting specific aspects of parental involvement such as setting and following up of home programs and facilitating discussions around goal-setting, codes and themes were generated for each question rather than the data collected overall. This allowed for specificity of SLPs' practices to be maintained, as themes were able to represent aspects of parental involvement rather than SLP practices of parental involvement in general. Each response may have had information categorised under multiple codes, and so the number of coded responses was higher than responses collected for each question.

Alongside codes being generated for meaningful and relevant responses, responses from each of the six open-text questions that did not contain meaningful content such as blank responses, vague or nondescript responses, or responses that indicated the question was not applicable to the client being discussed were tallied for reporting.

Following the researcher initiating the qualitative analysis process by importing survey data into NVIVO and becoming familiarised with the data content, initial codes were generated. If a new code was generated part-way through exploring responses, responses that had already been coded were revisited to see if they were relevant to the newly generated code. As responses were often brief and descriptive in nature, semantic coding (i.e., identifying explicit, surface-level meanings) was primarily used over latent coding (i.e., identifying underlying ideas and assumptions). Once all responses had been explored, codes were then revisited for to be renamed if appropriate, and refined according to whether each code was relevant to the research question.

Once coding had been finalised, themes were generated in order to categorise all codes that contained meaningful responses. Following completion of qualitative analysis, a member of the research team checked responses to determine themes and codes appropriately represented responses. Disagreements were revolved through consensus discussion and/or minor revision of the codes and themes.

Results

Australian SLPs were asked to participate in an online survey exploring how they involve parents in NDIS-funded speech and language intervention. The results section will detail the results of data explored through quantitative data, beginning with demographic information of participants and clients seen, followed by results from the Likert scale statements. Results regarding qualitative information taken from the survey's open-text responses will then be presented.

In total, 105 participants accessed the survey and 72 (69%) submitted a completed survey. Of the 33 who did not submit a completed survey, 8 did not progress past the initial information page, 14 did not continue past the first section, 8 did not continue past the second section, and 3 completed the survey but did not submit their responses. Data from these 33 participants were not included in the data analysis. Of the 72 participants whom submitted a completed survey, 55 (76%) also completed a submission for the random prize draw survey.

Participant Demographic

All participants (*n* = 72) were asked questions relating to demographic information regarding themselves and their caseload. Only the question regarding workplace setting had the option to select multiple choices. The tables and figures provided below illustrate results from these questions.

Table 1

Participants' Current Workplace Area

Area	**Frequency**
Melbourne	19 (26%)
Sydney	18 (25%)
Brisbane	5 (7%)

Adelaide	5 (7%)
Perth	3 (4%)
Geelong	3 (4%)
Wollongong	2 (3%)
Albury	2 (3%)
Other	15 (21%)

Note. n = 72*.* Percentages have been rounded up.

Table 2

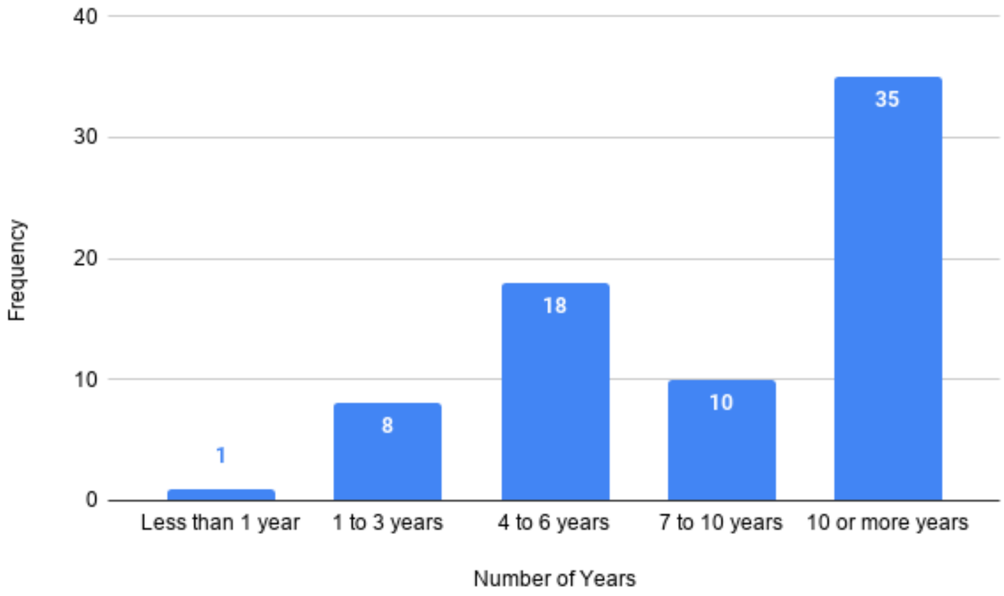
Participants' Current Workplace Setting

Workplace setting	**Frequency**
Private practice	43 (43%)
Disability	18 (18%)
Department of Education and Child Development	17 (17%)
Hospital	10 (10%)
Community health	5 (5%)
Non-Governmental organisation	2 (2%)
Other	4 (4%)

Note. n = 99*.* Percentages have been rounded up.

Figure 1

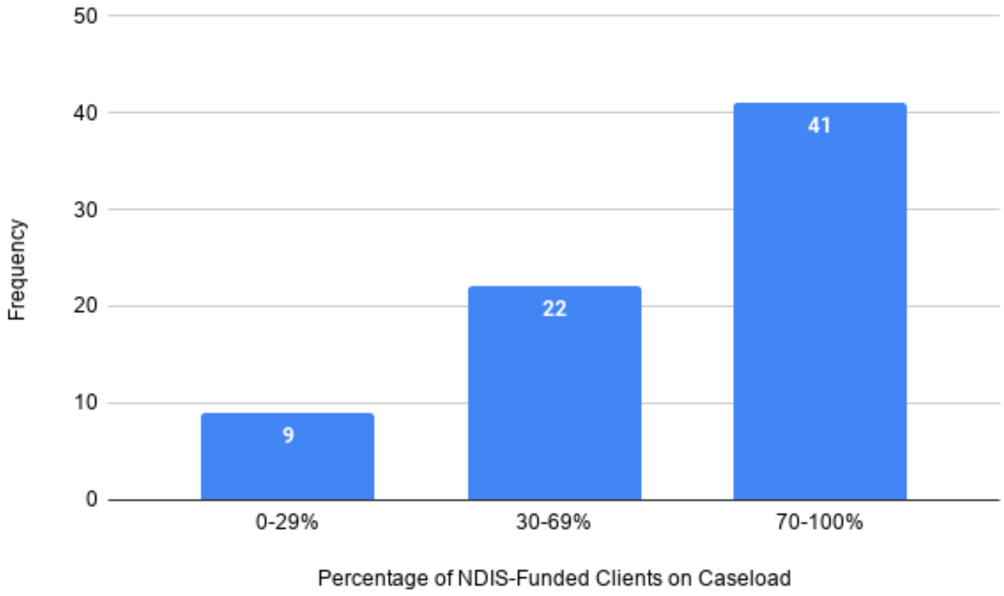
Reported Number of Years Providing Paediatric Speech and/or Language Intervention



Note. n = 72

Figure 2

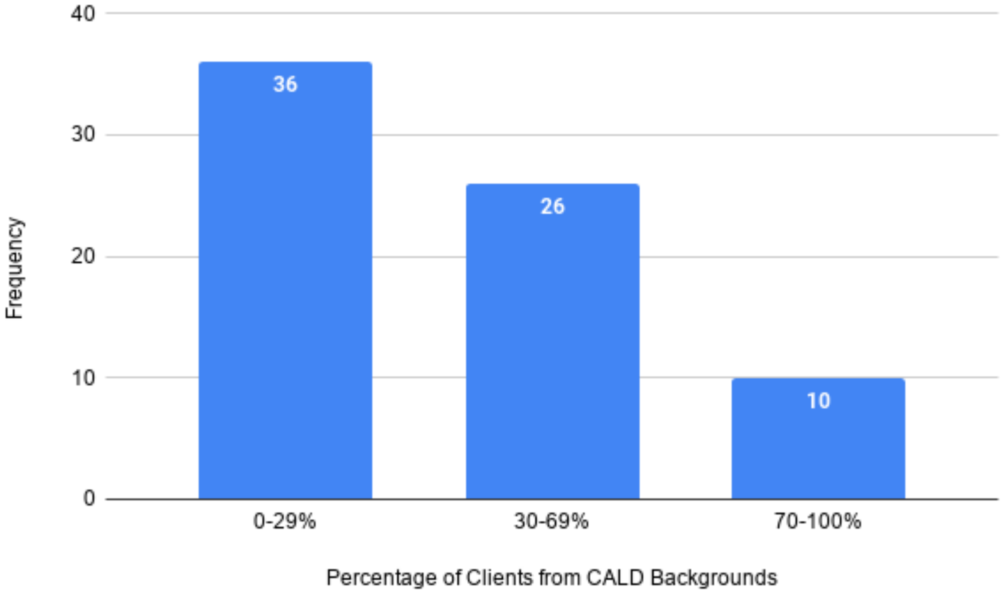
Proportion of NDIS-Funded Clients on Participant Caseload



Note. n = 72

Figure 3

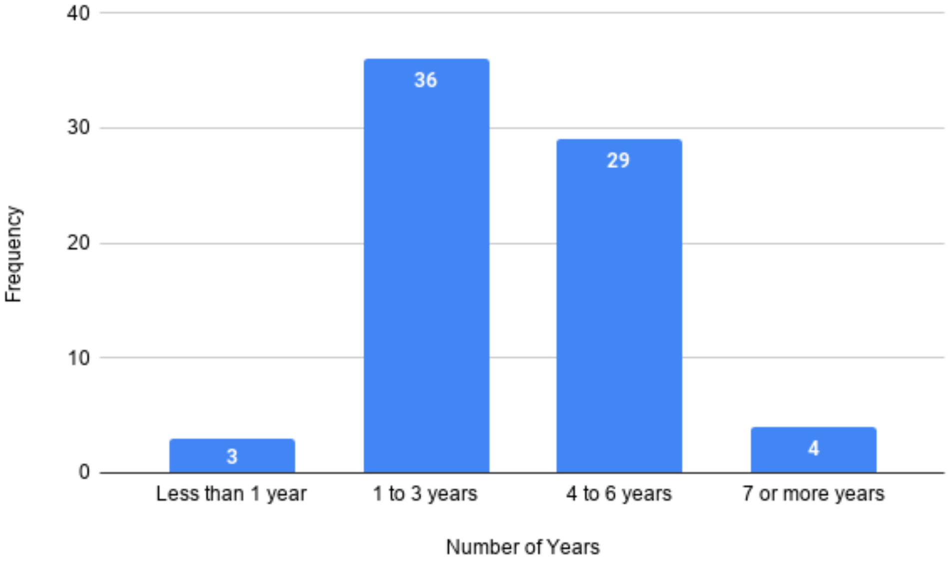
Proportion of Clients from Culturally and Linguistically Diverse Backgrounds on Participant Caseload



Note. n = 72

Figure 4

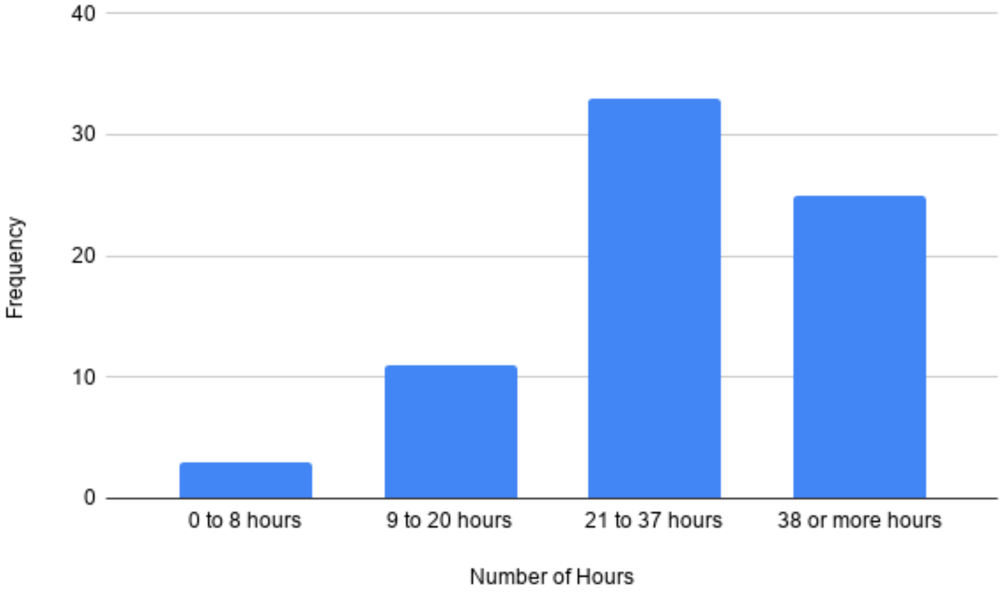
Duration Participant has Worked with NDIS-Funded Clients



Note. n = 72

Figure 5

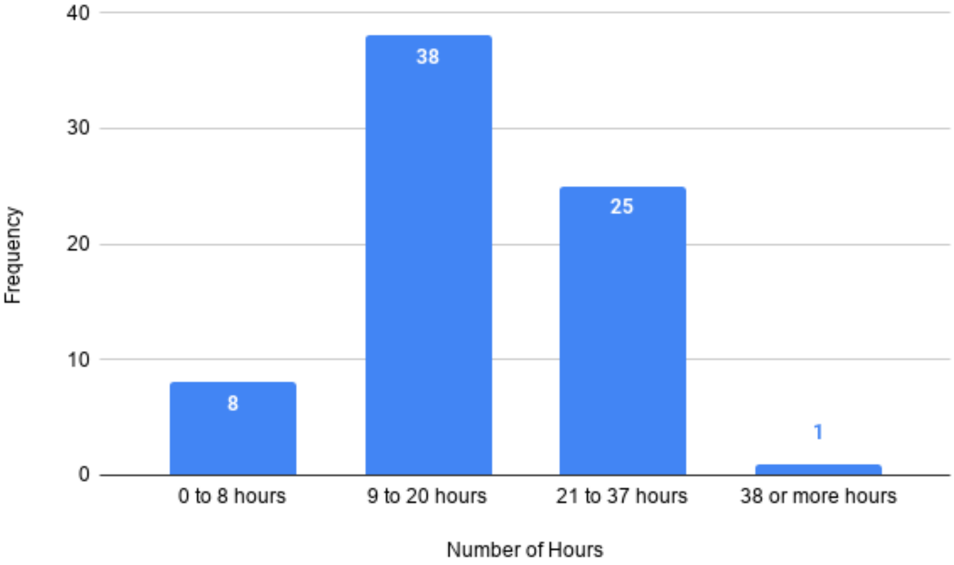
Estimated Weekly Number of Hours Participant Reported to Work as SLP



Note. n = 72

Figure 6

Estimated Weekly Number of Hours Participant Reported to Spend in Client Consultations



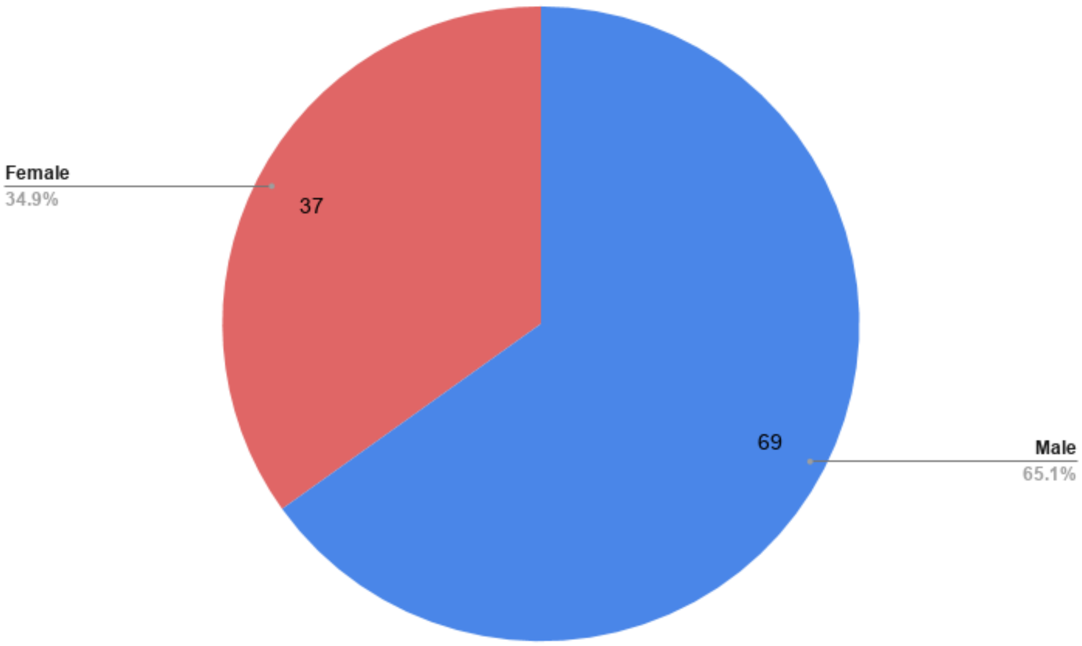
Note. n = 72

Client Demographic

All participants (*n* = 72) were asked to provide demographic information for up to three most recently seen children whose speech and/or language intervention was funded by the NDIS. As questions for children 2 and 3 were optional for the first 16 participants, and omitted for the remaining 56 participants, total numbers of demographic factors reported vary. The tables and figures provided below illustrate further results from these questions.

Figure 7

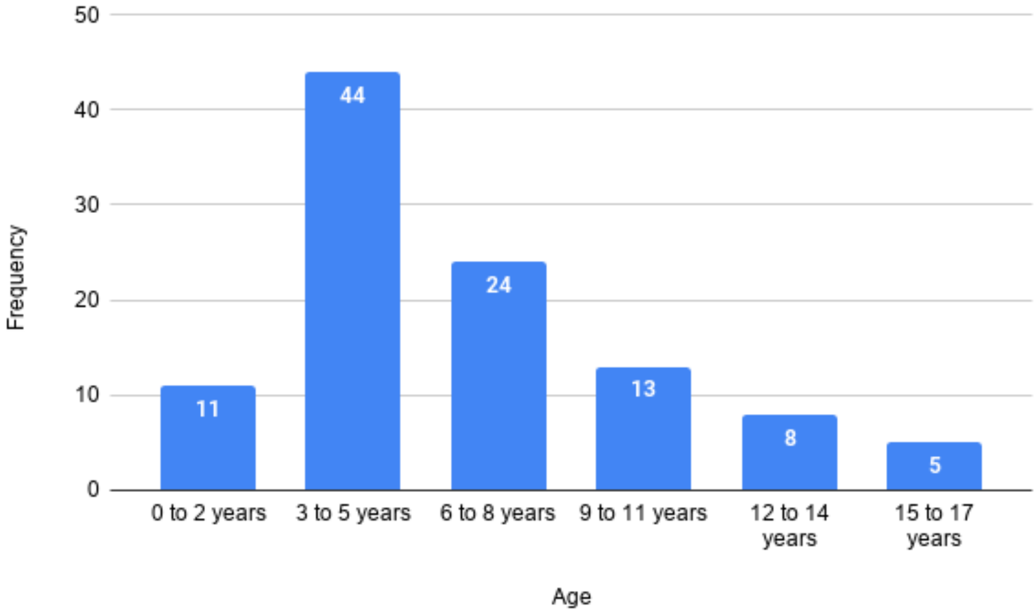
Reported Genders of Clients Discussed



Note. n = 106

Figure 8

Reported Ages of Clients Discussed at Time of Survey Completion



Note. n = 105

Participants were asked to report communication difficulties or disabilities of recently seen clients whose speech and/or language intervention is NDIS-funded. A total of 100 children were represented within this question. More than one difficulty or disorder was able to be selected. Of the children represented, 53 (53%) were identified as having more than one communication disorder or disability.

Table 3

Reported Areas of Communication Difficulties or Disabilities of Clients Discussed

Communication Disorder / Disability	**Frequency**
Autism Spectrum Disorder	50 (27%)
Speech Sound Disorder	47 (25%)
Developmental Language Disorder	39 (21%)

Intellectual Disability	18 (10%)
Global Developmental Delay	17 (9%)
Cerebral Palsy	3 (2%)
Deaf/Hard of Hearing	3 (2%)
Other	10 (5%)
Unsure	1 (1%)

Note. n = 188. Percentages have been rounded up.

Participants were asked to report on the intervention conducted for speech sound disorders for the clients discussed. A total of 106 children were represented within this question. Participants reported that 50 (50%) children represented received intervention for SSD, which roughly aligns with the report in Table 3 that 47 (47%) children were identified as having SSD. Of the children represented, 40 (40%) were identified as receiving more than one type of speech sound intervention.

Table 4

Reported Speech Intervention Conducted with Clients Discussed

Reported Speech Intervention	**Frequency**
Cued Articulation	30 (15%)
Phonological awareness	25 (12%)
Minimal Opposition Contrast	22 (11%)
Traditional articulation	19 (9%)
Auditory discrimination	16 (8%)
Auditory Bombardment	16 (8%)
Core Vocabulary	13 (6%)
Maximal Opposition Contrast	7 (3%)

Other	7 (3%)
I did not provide speech intervention for this client	50 (24%)

Note. n = 205. Percentages have been rounded up.

Participants were asked to report on the intervention conducted for language disorders for the clients discussed. A total of 106 children were represented within this question. More than one intervention strategy was able to be provided. Participants reported that 89 (89%) children represented received intervention for language disorder. Of the children represented, 63 (63%) were identified as receiving more than one type of language intervention. Table 5 details the list of provided language interventions stated within participants' responses.

Table 5

Reported Language Intervention Conducted with Clients Discussed

Reported Language Intervention	**Frequency**
Semantics and vocabulary	68 (26%)
Syntax and morphology	49 (19%)
Narrative and other forms of discourse	38 (14%)
Phonological awareness	27 (10%)
Metalinguistics	25 (10%)
Reading comprehension	16 (6%)
Social communication	9 (3%)
Augmentative and Alternative Communication	7 (3%)
Early language and play intervention	7 (3%)
Pre-linguistic communication	4 (2%)
Other	2 (1%)

I did not provide language intervention for this client	11 (4%)

Note. n = 263. Percentages have been rounded up.

Parental Involvement

Research Question 1

Do paediatric SLPs working with children whose speech and/or language intervention is funded by the NDIS believe they utilise practices that aim to facilitate parental involvement?

Table 6

Participant Responses Regarding Level of Agreement to Likert Scale Statements on Parental Involvement in NDIS-Funded Paediatric Speech and Language Intervention

Statement	Strongly disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Not Applicable	Average
I encourage parents/caregivers to be present during my intervention sessions	1 (1%)	4 (6%)	6 (8%)	13 (18%)	48 (67%)	0 (0%)	4.51
I encourage parents/caregivers to be involved in the work and activities conducted in my intervention sessions	2 (3%)	3 (4%)	6 (8%)	20 (28%)	41 (57%)	0 (0%)	4.41

I typically set home activities for parents/caregivers to complete with their children between intervention sessions	2 (3%)	2 (3%)	13 (18%)	18 (25%)	37 (51%)	0 (0%)	4.28
I typically follow up on home activities to assess the progress their child has made on these activities outside of intervention sessions	0 (0%)	4 (6%)	9 (13%)	30 (42%)	29 (40%)	0 (0%)	4.15
I involve parents/caregivers in goal-setting discussions for their child’s intervention	2 (3%)	2 (3%)	7 (10%)	15 (21%)	46 (64%)	0 (0%)	4.5
I provide information to parents/caregivers so they are made aware on what has been happening in intervention sessions in which they are not present	1 (1%)	0 (0%)	5 (7%)	16 (22%)	40 (57%)	10 (14%)	4.58
I allow parents/caregivers the choice to engage in correspondence (e.g. through email or phone) outside of intervention sessions so they are able to ask questions and provide information relating to their child’s intervention	2 (3%)	2 (3%)	6 (8%)	16 (22%)	46 (64%)	0 (0%)	4.49

If the parent/caregiver attends the session, I allow some time to discuss details relating to the intervention (e.g. the plan of the day’s intervention, intervention progress, feedback from parents relating to intervention)	1 (1%)	2 (3%)	4 (6%)	16 (22%)	49 (68%)	0%	4.59
Totals and averages	11 (2%)	19 (3%)	56 (10%)	144 (25%)	336 (58%)	10 (2%)	4.44 (avg)

Note. n = 72. Percentages have been rounded up.

The majority of applicable responses to each Likert scale statements were selected to be either agree or strongly agree. Mean average scores for all Likert statement responses was 4.44 (range: 4.15 - 4.59). Only the statement regarding providing information to parents whom are not present in intervention sessions had responses indicating the statement was not applicable. Open-text responses for the 10 participants were examined to find possible explanations for why this statement was not applicable. Of these participants, 5 indicated that parental attendance in consultations was mandatory or a set expectation, and 5 stated that parents were always present.

Research Question 2

Are there any characteristics of SLPs that influence if or how they facilitate parental involvement in speech and/or language intervention funded by the NDIS?

Table 7

Bivariate Correlations Between Selected Demographic Characteristics and Responses on Likert Scale Statement 1: I Encourage Parents/Caregivers to be Present During my Intervention Sessions

Demographic characteristics	**Score**	**p-value**	**Significance**
Years provided intervention for clients with speech and/or language disorders as an SLP	$r_s = .153$	.206	Not significant
Percentage of clients with NDIS funding on participants' current caseload	$r_s = .348$	.003	Not significant
Percentage of clients who come from culturally and linguistically diverse backgrounds on participants' current caseload	$r_s = .001$	.994	Not significant
Work setting selected as private practice	$U = 543$	.453	Not significant
Work setting selected as the Department of Education and Child Development (DECD)	$U = 241$	<.001	Significant

Note. *n* = 72. *U* = Mann-Whitney U Score. r_s = Spearman's Rank-Order Correlation Coefficient

Table 8

Bivariate Correlations Between Selected Demographic Characteristics and Responses on Likert Scale Statement 2: I Encourage Parents/Caregivers to be Involved in the Work and Activities Conducted in my Intervention Sessions

Demographic Characteristics	**Score**	**p-value**	**Significance**
Years provided intervention for clients with speech and/or language disorders as an SLP	r_s = .299	.012	Not significant
Percentage of clients with NDIS funding on participants' current caseload	r_s = .335	.005	Not significant
Percentage of clients who come from culturally and linguistically diverse backgrounds on participants' current caseload	r_s = -.068	.579	Not significant
Work setting selected as private practice	*U* = 514	.279	Not significant
Work setting selected as the Department of Education and Child Development (DECD)	*U* = 257	.003	Not significant

Note. *n* = 72. *U* = Mann-Whitney U Score. r_s = Spearman's Rank-Order Correlation Coefficient

Table 9

Bivariate Correlations Between Selected Demographic Characteristics and Responses on Likert Scale Statement 3: I Typically Set Home Activities for Parents/Caregivers to Complete with Their Children Between Intervention Sessions

Demographic Characteristics	**Score**	**p-value**	**Significance**
Years provided intervention for clients with speech and/or language disorders as an SLP	$r_s = .417$	<.001	Significant
Percentage of clients with NDIS funding on participants' current caseload	$r_s = -.031$	.802	Not significant
Percentage of clients who come from culturally and linguistically diverse backgrounds on participants' current caseload	$r_s = -.105$	.388	Not significant
Work setting selected as private practice	$U = 506$	.249	Not significant
Work setting selected as the Department of Education and Child Development (DECD)	$U = 278$	.009	Not significant

Note. $n = 72$. U = Mann-Whitney U Score. r_s = Spearman's Rank-Order Correlation Coefficient

Table 10

Bivariate Correlations Between Selected Demographic Characteristics and Responses on Likert Scale Statement 4: I Typically Follow up on Home Activities to Assess the Progress Their Child has Made on These Activities Outside of Intervention Sessions

Demographic Characteristics	Score	p-value	Significance
Years provided intervention for clients with speech and/or language disorders as an SLP	$r_s = .317$	.007	Not significant
Percentage of clients with NDIS funding on participants' current caseload	$r_s = -.111$	.361	Not significant
Percentage of clients who come from culturally and linguistically diverse backgrounds on participants' current caseload	$r_s = -.205$	.089	Not significant
Work setting selected as private practice	$U = 554$	.608	Not significant
Work setting selected as the Department of Education and Child Development (DECD)	$U = 377$	.278	Not significant

Note. $n = 72$. U = Mann-Whitney U Score. r_s = Spearman's Rank-Order Correlation Coefficient

Table 11

Bivariate Correlations Between Selected Demographic Characteristics and Responses on Likert Scale Statement 5: I Involve Parents/Caregivers in Goal-Setting Discussions for Their Child's Intervention

Demographic Characteristics	**Score**	**p-value**	**Significance**
Years provided intervention for clients with speech and/or language disorders as an SLP	$r_s = .286$	.016	Not significant
Percentage of clients with NDIS funding on participants' current caseload	$r_s = .177$	.144	Not significant
Percentage of clients who come from culturally and linguistically diverse backgrounds on participants' current caseload	$r_s = -.178$	.140	Not significant
Work setting selected as private practice	$U = 484$	.118	Not significant
Work setting selected as the Department of Education and Child Development (DECD)	$U = 249$	.001	Significant

Note. $n = 72$. U = Mann-Whitney U Score. r_s = Spearman's Rank-Order Correlation Coefficient

Table 12

Bivariate Correlations Between Selected Demographic Characteristics and Responses on Likert Scale Statement 6: I Provide Information to Parents/Caregivers so They are Made Aware on what has been Happening in Intervention Sessions in Which they are not Present

Demographic Characteristics	**Score**	**p-value**	**Significance**
Years provided intervention for clients with speech and/or language disorders as an SLP	$r_s = .215$	.099	Not significant
Percentage of clients with NDIS funding on participants' current caseload	$r_s = .106$	.422	Not significant
Percentage of clients who come from culturally and linguistically diverse backgrounds on participants' current caseload	$r_s = -.224$	.086	Not significant
Work setting selected as private practice	$U = 377$	.321	Not significant
Work setting selected as the Department of Education and Child Development (DECD)	$U = 187$	<.001	Significant

Note. $n = 72$. U = Mann-Whitney U Score. r_s = Spearman's Rank-Order Correlation Coefficient

Table 13

Bivariate Correlations Between Selected Demographic Characteristics and Responses on Likert Scale Statement 7: I Allow Parents/Caregivers the Choice to Engage in Correspondence (e.g., Through Email or Phone) Outside of Intervention Sessions so they are Able to Ask Questions and Provide Information Relating to their Child's Intervention

Demographic Characteristics	**Score**	**p-value**	**Significance**
Years provided intervention for clients with speech and/or language disorders as an SLP	$r_s = .193$	.110	Not significant
Percentage of clients with NDIS funding on participants' current caseload	$r_s = .036$	.770	Not significant
Percentage of clients who come from culturally and linguistically diverse backgrounds on participants' current caseload	$r_s = -.088$	.471	Not significant
Work setting selected as private practice	$U = 468$	.073	Not significant
Work setting selected as the Department of Education and Child Development (DECD)	$U = 417$	.584	Not significant

Note. $n = 72$. U = Mann-Whitney U Score. r_s = Spearman's Rank-Order Correlation Coefficient

Table 14

Bivariate Correlations Between Selected Demographic Characteristics and Responses on Likert Scale Statement 8: If the Parent/Caregiver Attends the Session, I Allow Some Time to Discuss Details Relating to the Intervention (e.g., the Plan of the Day's Intervention, Intervention Progress, Feedback from Parents Relating to Intervention)

Demographic Characteristics	**Score**	**p-value**	**Significance**
Years provided intervention for clients with speech and/or language disorders as an SLP	$r_s = .348$	.003	Not significant
Percentage of clients with NDIS funding on participants' current caseload	$r_s = .180$	.135	Not significant
Percentage of clients who come from culturally and linguistically diverse backgrounds on participants' current caseload	$r_s = -.171$	.156	Not significant
Work setting selected as private practice	$U = 452$	.035	Not significant
Work setting selected as the Department of Education and Child Development (DECD)	$U = 182$	<.001	Significant

Note. $n = 72$. U = Mann-Whitney U Score. r_s = Spearman's Rank-Order Correlation Coefficient

Results in Tables 7 to 14 display relevant scores, p-values, and significance of select demographic factors for each Likert scale statement. Five instances of significance across two demographic factors were identified following Bonferroni's correction: Participants who did not state they worked in the DECD had higher levels of agreement than participants who stated they worked in the DECD for Likert scale statement 1 (i.e. the statement regarding encouraging parental attendance) (U = 241, p <.001), statement 5 (i.e. the statement regarding involving parents within goal-setting discussions) (U = 249, p = .001), statement 6 (i.e. the statement regarding providing information regarding consultations to parents not present) (U = 187, p <.001), and statement 8 (i.e. the statement regarding allowing time for discussion of session plans within consultations) (U = 182, p <.001).

The demographic factor of years provided intervention for clients with speech and/or language disorders as an SLP was significantly positively correlated with statement 3 (i.e., the statement regarding setting home activities) (r_s = .417, p <.001). No significance was found with chosen demographic factors for statements 2, 4, and 7.

Open-Text Responses

Research Question 3

What specific practices do paediatric SLPs utilise to facilitate parental involvement in speech and/or language intervention funded by the NDIS?

All participants (*n* = 72) were asked questions regarding their practices of parental involvement with parents of 1 to 3 most recently seen children whom had access to NDIS funding. Participants were also asked to report their perceived barriers and facilitators regarding parental involvement for these clients. Despite demographic information being provided for 106 children, information provided responding to the open-text questions listed below was only done so for 99-100 children. The following tables detail themes and codes generated.

Table 15

Thematic Coding for Question 1 of Section 3: Please Describe the Ways in Which You Encouraged the Attendance and Involvement of the Parent/Caregiver in Your Intervention Sessions with Their Child (if Any)

Themes and Codes	**# responses corresponding to code**	**Example quote corresponding to code**
Theme: Communication with parents		
Engaging parent in conversation within consultations	34	*Lots of discussion with parent around intervention strategies...* (Participant 2)
Facilitating regular correspondence with parents outside of sessions	13	*If there are specific concerns that are causing issues the parent may email or text me…* (Participant 11)

Collaborative goal setting with parents	9	*The parent collaborates in goal setting to ensure their goals are being targeted which then leads to being engaged in the intervention.* (Participant 70)
Providing testimonials to facilitate parent motivation to be involved	5	*Tell the parents some cured cases, so as to encourage and make them confident.* (Participant 19)
Relationship building with parents	2	*… develop rapport with the parents by conversing with them in general terms, i.e., not just therapy-specific questions and comments.* (Participant 9)
Utilising interpretation for parents with CALD backgrounds	2	*The child's mother attended the initial assessment with the older brother present to translate information for the mother as needed.*
Theme: Service delivery practices		
Holding consultations at a convenient time and/or place for parent	21	*Sessions usually take place in the family home…* (Participant 67)

Capacity or skill building of parents through education or training	17	*Intentional modelling of strategies for the parents who are then encouraged to try it out for themselves.* (Participant 7)
Requiring or strongly suggesting parental attendance at consultations	17	*Parent attendance is required in our service* (Participant 4)
Encouraging parents to engage in intervention activities within consultations	15	*Requesting for the mum to join the session's activities, and take over with the speech and language strategies used* (Participant 47)

Other responses	**# responses corresponding to code**	**Example quote corresponding to code**
Vague, nondescript, or off-topic response	12	*Only a healthy body can lead a better life.* (Participant 20)
Response indicating question was not applicable to client discussed	0	
Blank response	42	

Note. Non-Blank Response *n* = 100

Theme 1: SLPs Engaging in Communication with Parents

Participants stated that engaging parents in conversation within consultations has helped parents to be more informed and comfortable in being involved within session activities. 34% (*n* = 34) of responses indicated that participants conduct debriefs within each session, where relevant information regarding recent events within the family's week, as well as an overview of the session's schedule, is discussed with parents. Discussions around intervention strategies including why they have been chosen and their potential benefits for supporting communication development was also cited to be included as topics within these conversations. A small number of responses (*n* = 2, 2%) detailed that engaging parents in conversation where topics outside of intervention were discussed helped to develop rapport and professional relationships with parents. 2% (*n* = 2) of responses also stated that interpreters were utilised when beneficial to communicate with parents with a CALD background.

Engaging parents in correspondence outside of sessions, such as through text messages, phone calls, and email was stated in 13% (*n* = 13) of responses to elevate parental attendance and engagement within the intervention process. Details within these responses cited that enabling these avenues of correspondence by encouraging emails to be sent outside of sessions has resulted in parents regularly sending emails to detail relevant information and queries and concerns. This was said to have helped parents be more connected to the intervention conducted alongside maintaining intervention to be relevant and contextualised to the family's life. Sending parents session notes through these correspondence channels was also cited to sometimes lead to perceptions of parents having increased interest in the intervention provided within consultations.

9% (*n* = 9) of responses stated that enabling collaborative goal-setting discussions was seen to be a facilitator for parental attendance and involvement within sessions. These responses detailed that initiating goal-setting discussions at the start of the intervention journey helped parents to feel as though their opinions about their child is being heard and taken into account, leading to a higher chance for increased engagement from parents. 5% (*n* = 5) of responses stated that participants had provided testimonials where previous cases or clients had made substantial progress as a result of speech-language pathology intervention.

Theme 2: SLPs' Service Delivery Practices that Facilitate Parental Attendance and Involvement

Participants detailed utilising a wide range of components of their service delivery practice to help support parents to attend and be involved within sessions. 21% (*n* = 21) of responses stated that consultations were held at a time and/or place convenient for parents, most commonly cited to be through allowing for home visits to occur (17%, *n* = 17). Responses detailed that home visits were beneficial not only in enabling parents to attend sessions, but also in allowing for the intervention to take place in naturalistic settings where parents were better able to showcase their day-to-day routines and utilise toys within the home that parents are familiar with. Parent attendance was stated in 17% (*n* = 17) of responses to be a requirement or expectation within the organisation or service delivery model participants worked under, allowing adaptations of session times and settings assisted in maintaining these expectations to be fulfilled.

In supporting parental engagement with session activities, 17% (*n* = 17) of responses stated that participants prioritised coaching, educating, and supporting parents within their participation. Practices of coaching and education were said to be done through providing relevant information about intervention strategies and modelling correct implementation of these strategies for parents to emulate in tandem with participants. Parents were then coached further through suggestions and feedback provided by participants. This feedback was also said to be extended to implementations of activities conducted outside of consultations, where parents show video recordings of interactions between themselves and their children to then be coached in the next consultation. 17% (*n* = 17) of responses detailed that parents were also encouraged to take part in the implementation of session activities by requesting they join their child at the table or on the floor where activities were conducted.

Table 16

Thematic Coding for Question 2 of Section 3: Please Describe the Ways in Which You Set and Followed up on Home Activities for the Parent/Caregiver to Work on Between your Intervention Sessions with their Child (if Any)

Themes and Codes	**# responses corresponding to code**	**Example quote corresponding to code**
Theme: Communication regarding home activities		
In-person discussion regarding implementation and following up of home activities	58	*We talked about ways to incorporate the words into play before they left each session, and I would then*

		check in at the start of the next session to see how they went… (Participant 1)
Correspondence outside of consultations regarding setting and following up of home activities	16	*An email is sent after the session outlining what was targeted…* (Participant 70)
Theme: Facilitating parents' implementation of home activities		
Providing written suggestions, guidance, or resources for administration of home activities	35	*A folder is sent home from school with the current week's work with simple instructions.* (Participant 37)
Encouraging home activities in day-to-day routines and natural settings	18	*I try to make any activities things that are easily fit into daily life … I suggest activities such as: how to practice narrative during car rides; how to increase language while doing reading homework…* (Participant 65)
Practising or trialling home activities within consultations	6	*Activities have been trialled within intervention sessions…* (Participant 4)

Other responses	**# responses corresponding to code**	**Example quote corresponding to code**

Vague, nondescript, or off-topic response	11	*Organize more activities similar to parent-child activities to let children make more friends and strengthen communication between children.* (Participant 27)
Response indicating question was not applicable to client discussed	1	
Blank response	42	

Note. Non-Blank Response *n* = 100

Theme 1: Communication Regarding Home Activities

When asked the ways in which participants set and followed up on home activities, the majority of responses (*n* = 58, 58%) cited that in-person discussions regarding home activities were integrated within intervention sessions. Regarding implementation of home activities, responses detailed that participants discussed specific home practice targets and how these can be completed successfully in the time between sessions. Brainstorming potential adaptations of home practice activities to best suit parents' day-to-day life schedules and routines was also commonly cited to be a discussion topic. Participants who stated they followed up on home activity progress often said they did so by allocating a small amount of time at the start of each session to review the home activities completed. These discussions were said to include asking parents to reflect on what home activities they were able to complete prior to the session alongside what they felt worked, what activities they felt were beneficial or not beneficial to their child’s communication development, and any difficulties found within implementation

16% (*n* = 16) of responses also stated that participants utilised avenues of email and text message correspondence to detail or remind parents specific instructions for implementation of home activities. Responses detailed that parents were encouraged to correspond with participants to send through any queries or requests for further information or instructions, as well as to provide feedback of completed home activities. These examples of correspondence were described to lead to more contextualised intervention within the next intervention session, as feedback from parents enabled participants to adapt intervention activities in accordance to recent developments of progress.

Theme 2: Facilitating Parents’ Implementation of Home Activities

18% (*n* = 18) of responses cited that discussions took place with parents around how home activities could be best adapted to suit day-to-day routines and natural settings of the family’s life. These conversations were said to include enquiries such as how home activities provided could be integrated into scenarios of play in the home environment, ways in which the activities could be implemented without requiring any specialised resources or software. Responses also stated that parents were asked to provide outlines of their schedules and day-to-day routines and encouraged to engage in collaborative brainstorming around which of these activities could allow for integration of home activities. Participants often noted that parents could contact participants with any queries or concerns around these adaptations of the activities.

The provision of physical copies of home activities was often said to be a facilitator of home activity implementation in 35% (*n* = 35) of responses. These responses indicated that providing physical copies allowed for easier and more streamlined implementation within the family's natural environment. Responses detailed that parents were provided prepared, easy to use resources such as decodable readers, phonological awareness worksheets, and homework books containing language development activities. Providing physical copies was also said to be beneficial in allowing for a more streamlined follow-up of home activity implementation, as parents were able to bring these sheets and discuss what was worked on and any related queries or ideas around further adaptation. 6% (*n* = 6) of responses cited that resources and activities were sometimes trialled within sessions to help educate and support parents on implementation, as well as to evaluate any further potential adaptations to the activities.

Table 17

Thematic Coding for Question 3 of Section 3: Please Describe the Ways in Which You Have Allowed the Parent/Caregiver to Discuss their Opinions Relating to the Goals of Intervention with Their Child (if Any)

Themes and Codes	# responses corresponding to code	Example quote corresponding to code
Theme: Enabling collaborative goal-setting discussions with parents		

Allowing for in-person discussion with parents/caregivers regarding goals	53	*If they raise something, I will ask questions to get more information especially if it means changing goals to fit in their family needs*. (Participant 66)
Allowing parents to discuss their opinions regarding potential goals	49	*Parents are asked at the initial consultation to list their goals for their child in the area of social skills* (Participant 66)
Correspondence outside of consultations	17	*The parent will often call outside of appointment times which allows us to discuss goals and behaviours of concern. We also text and write emails as a way of keeping up good communication.* (Participant 51)
Parents being able to share information as experts of their children	14	*Parents also provide me with words client has been interested in staying at home each week…* (Participant 10)
Setting of routine meetings to discuss goal-setting	12	*We have started picking goals together every six months … and discuss* [sic] *progress towards goals every 1-2 months.* (Participant 10)

Adapting communication to ensure clarity of discussions with parents	12	*Ask lots of clarifying questions e.g., "does that make sense to you?" "how do you feel about that?"* (Participant 15)
Discussion relating to goals at each intervention session	9	*Short term goals are reminded each session…* (Participant 16)
Use of assessment procedures which facilitate parental involvement	7	*An initial assessment that covers all domains (modified Routines Based Assessment) is completed at the initial appointment with the family…* (Participant 70)

Other responses	**# responses corresponding to code**	**Example quote corresponding to code**
Vague, nondescript, or off-topic response	18	*The right way of intervention can help children solve language barriers as soon as possible.* (Participant 23)
Response indicating question was not applicable to client discussed	0	
Blank response	43	

Note. Non-Blank Response *n* = 99

Theme: Enabling Collaborative Goal-Setting Discussions with Parents

Responses to this open-text question detailed that parents were often enabled and encouraged to engage in goal-setting discussions such as through in-person discussions (in 54% (*n* = 53) of responses) and correspondence outside of consultations (in 17% (*n* = 17) of responses), as well as to have the opportunity to amend and adapt goals routinely, through a range of facilitators within service delivery practices. In initial goal-setting discussions, parents were said to be made aware that goals are able to be dynamic in nature and can change throughout the course of the intervention. 12% (*n* = 12) of responses stated that setting of routine meetings helped facilitate the review and potential adaptation of previously set goals, with participants stating that routine meetings were scheduled to occur at set intervals; most commonly at the 6 or 12 month mark (5%, *n* = 5). The setting of these routine meetings may be in conjunction with the NDIS plan review schedule, as NDIS plans are often reviewed annually. 9% (*n* = 9) of responses stated that discussions around reviewing of goals often occurred at the start of each consultation, albeit focusing on more granular, session-specific goals. Semi-structured or structured interview formats were also stated in 7% (*n* = 7) of responses to be used to facilitate these discussions. These responses detailed the use of previously created questionnaire forms, as well as the use of more established processes such as the Routines Based Interview or the Family Support Service Program.

50% (*n* = 49) of to this open-text question commonly cited practices of allowing for goal-setting discussions where parents had the option to voice their opinions on relevant goals was utilised. 12% (*n* = 12) of responses stated that the phrasing of questions that drive goal-setting discussions were adapted to suit parents’ communication styles, such as asking parents what they believe to be the most important outcomes for their child, as well as asking what challenges they believe they and their child commonly face. These responses detailed that clarification questions were utilised throughout these discussions, such as parents being asked if the information provided made sense to them, and if parents felt the information discussed was relevant and suitable to their life. While responses stated that in-person conversations were the primary avenue of these goal-setting discussions, responses infrequently cited email correspondence was utilised as an avenue for these discussions.

As NDIS plans contain general goals written by the parents in partnership with NDIS plan consultants during an initial planning meeting, participants stated to utilise these as rough guides to collaboratively develop more contextualised goals within their initial case discussions with parents. The use of these developed goals allows parents to enter these discussions with their opinions on relevant goals already generated. This was said to be useful in participants viewing parents as experts of their children, stated in 14% (*n* = 14) of responses, as parents’ views on goals for their child was sometimes stated to underpin and guide the content communicated within these discussions.

Table 18

Thematic Coding for Question 4 of Section 3: Please Describe how You Have Maintained Correspondence with the Parent/Caregiver of this Child in Order to Provide Information and Allow for Parent/Caregiver Feedback on Information, Questions, and Feedback (if at All)

Themes and Codes	**# responses corresponding to code**	**Example quote corresponding to code**
Theme: Discussions during consultations		
In-person discussions with parents/caregivers during consultations	46	*Initial 5-10 mins of the session are used for family to provide feedback of how the week went as well as anything else they want to discuss.* (Participant 70)
Aiming to set routine meetings with parents/caregivers whom are often absent from sessions	3	*I try to make an appointment each school holidays with the parents…* (Participant 5)
Theme: Correspondence with parents outside of consultations		
Correspondence outside of sessions through email, phone, text message, and video conferencing	79	*This mother is very involved, lots of calls, texts, emails…* (Participant 13)

Written correspondence of session details such as notes and session summaries	27	*Email is sent after each session with a summary and plan…* (Participant 70)

Other responses	**# responses corresponding to code**	**Example quote corresponding to code**
Vague, nondescript, or off-topic response	1	*Irregular communication with parents and children on the language, timely understanding of the situation at the same time can also better conduct counselling* (Participant 34)
Response indicating question was not applicable to client discussed	1	
Blank response	42	

Note. Non-Blank Response *n* = 100

Theme 1: Discussions During Consultations

46% (*n* = 46) of responses cited discussions and conversations occur within consultations, with topics of discussion detailed to be reflective feedback and clarification and further questioning from the parent following intervention activities. 3% (*n* = 3) of responses wrote that meetings with parents were scheduled on a routine basis, stated to be monthly or during school holidays, so that both parties could catch up in more detail regarding recent progress made, allow for demonstration of strategies used within intervention sessions, and discussion of any other relevant information pertaining to the child's intervention. These meetings were stated to be through either face-to-face or a phone call.

Theme 2: Correspondence with Parents Outside of Consultations

79% (*n* = 79) of responses detailed a range of ways in which participants engage parents outside of consultation time. Of the avenues of correspondence frequently listed within responses, the most common was email (56%, *n* = 55), followed by phone calls (34%, *n* = 34), text messages (18%, *n* = 18), and video conferencing software (7%, *n* = 7). 3% (*n* = 3) of responses detailed that participants and parents share a note-keeping communication book to be passed between both parties.

27% (*n* = 27) of responses stated that clinical notes were often sent via email in order to keep parents up to date with recent information pertaining to intervention. These responses detailed that this occurred if parents were unable to attend consultations. Clinical notes provided were also stated in these responses to include information such as an overview of the session's content and progress attained, plans for future sessions, and instructions for home activities, with parents encouraged to respond to these emails with any comments, concerns, or requests for further information.

Research Question 4

Do paediatric SLPs believe there to be barriers that prevent them from further involving parents within paediatric, NDIS-funded speech and/or language intervention, and, if so, what are the barriers?

Table 19

Thematic Coding for Question 5 of Section 3: What Barriers do You Feel may have Influenced Yourself from Involving Parents/Caregivers More in Intervention with this Child (if Any)?

Themes and Codes	# responses corresponding to code	Example quote corresponding to code
Theme: Workplace-centric barriers		
Working within a school	4	*Therapy at school is always a barrier to more intensive involvement in intervention.* (Participant 16)

Theme: SLP-centric barriers		
Lack of confidence or not feeling comfortable to involve parent/caregiver in intervention	2	*I lacked the confidence in my own clinical skills, which made me less likely to involve the parents and more likely to want to do the intervention myself.* (Participant 48)
Theme: Parent-centric barriers		
Insufficient time capacity of parents	14	*The parents both work full time and have limited capacity/time to implement strategies provided.* (Participant 11)
Parents not agreeing with, understanding, or believing in intervention methodology	14	*That parents think we as SP are responsible for all progress and they are no experts and therefore should let me do all the activities.* (Participant 61)
Parents choosing not to be engaged in service delivery	13	*Mum appears disengaged and wants time to herself so drops off her daughter to sessions.* (Participant 52)

Parent not being able to be involved in intervention due to personal factors	11	*Not able to utilise tech including iPad for follow up or to have internet at home. Many life complications family are dealing with.* (Participant 3) *Mum's capacity for new information and her own mental and physical health conditions*. (Participant 2)
Language and cultural differences	9	*Family is CALD, and Mo’s English is very good but not perfect, and she sometimes has difficulty explaining concerns to me.* (Participant 10)
Parental involvement is not appropriate with specific child	5	*The child doesn’t like to work with the mother in the room and works best when the mother is either not in the room…* (Participant 52)

Other responses	**# responses corresponding to code**	**Example quote corresponding to code**

Vague, nondescript, or off-topic response	3	*Having a good rapport with the parent and making it compulsory that they attend as far as possible* (Participant 44)
Response indicating question was not applicable to client discussed	23	
Blank response	43	

Note. Non-Blank Response *n* = 99

Theme 1: Workplace-Centric Barriers

4% (*n* = 4) of responses stated that there were difficulties in facilitating parental attendance in intervention provided within school-based settings. All of these responses stated that parents were not able to attend school-based consultations, with 1 of these responses citing parents tending to other children as the reason for attendance to not be possible.

Theme 2: SLP-Centric Barriers

The majority of responses (*n* = 97, 98%) relating to barriers compromising the level of parental involvement did not include any details regarding barriers centred on the work participants themselves conduct as SLPs. 2% (*n* = 3) of responses stated that participants felt as though they lacked confidence in their ability to facilitate parental involvement within their service delivery, with one response detailing this being due to practising as a clinician new to the profession.

Theme 3: Parent-Centric Barriers

Participants reported on a range of barriers they believed to compromise their level of parental involvement. 14% (*n* = 14) of responses stated that parents' insufficient time capabilities were identified within service delivery as a primary barrier. This barrier was cited to be often due to parents' work commitments such as work schedules or amount of work hours that made parental involvement infeasible, as well as family commitments such as being preoccupied with other children within consultations, or needing to attend to other children's requirements throughout the day.

Responses stated that parental barriers of resisting engagement within service delivery (13%, *n* = 13) and not agreeing or believing in the intervention methodology provided within the service delivery framework (14%, *n* = 14) were reported to potentially impede further parental involvement. These responses detailed that some parents were often disengaged within consultations through sitting in the waiting room or being pre-occupied or disinterested when sitting in on intervention sessions. Responses also indicated that parents believe that service delivery models implemented in intervention should be clinician-centric and are sometimes not confident in the effectiveness of other service delivery models such as those that centre on family-friendly practices.

A range of personal barriers pertaining to parents' lives were reported in 11% (*n* = 11) of responses. Personal factors such as parents not being able to utilise or have access to technology such as iPads and the internet, parents having compromised capacity due to mental and physical health concerns, low socioeconomic status and education of parent, and parents being separated or having split custody arrangements and thus difficult to contact either parent were cited within responses. One participant stated that some families have given up intervention due to the high cost associated with seeking services, however this response may not be indicative of intervention services funded by the NDIS, as the scheme covers allied health service provision costs.

9% (*n* = 9) of responses indicated that language and cultural differences between participants and parents was seen as a barrier to further parental involvement. Responses detailed that language barriers impede parents' abilities to communicate ideas and concerns effectively, as well as to get involved in language-based activities. Cultural differences as barriers were stated in responses to impact on alignment between expectations and what can be realistically achieved within service delivery.

5% (*n* = 5) of responses stated that it was infeasible or impractical to facilitate parental involvement within some specific cases due to aspects of paediatric clients' behaviour of characteristics. These included children being unaware of their own diagnosis, not wanting to work with their parents or carers in the clinic room or in home practice, and being easily distractible with the parent in the room. One participant also stated that older children were observed to be more resistant to parents' instructions.

Research Question 5

Do paediatric SLPs believe there to be facilitators that assist them in further involving parents within paediatric, NDIS-funded speech and/or language intervention, and, if so, what are the facilitators?

Table 20

Thematic Coding for Question 6 of Section 3: What has Helped You to Involve Parents Bore in Intervention with this Child (if Any)?

Themes and Codes	# responses corresponding to code	Example quote corresponding to code
Theme: Communication and rapport building with parents		
Collaborative and open communication with parents	23	*Open communication has been the most important aspect…* (Participant 9) *Listening more and asking them questions about what the* (sic) *see at home, what is important to them.* (Participant 51)
Encouraging family attendance and participation within intervention	12	*…using activities that another adult is needed, directly ask to join…* (Participant 58)

Building a professional relationship with parents	5	*Building a relationship of trust with the parents…* (Participant 48)
Adapting session information or content to facilitate communication with parents	4	*Providing very clear and simple explanations for therapy strategies, discussing things repeatedly and providing information in multiple forms e.g., Verbally, written…* (Participant 2)
Theme: Service delivery practices as facilitators		
Adapting session times or settings to suit parent	12	*Sessions during school holidays when parent has more time and space to be able to engage in therapy.* (Participant 2)
Organisational policy that requires parents to attend consultations	4	*It's helpful that my company policy is that a parent needs to be in the room, so I don't have to convince them to come in*. (Participant 10)
Theme: Parent characteristics or behaviour as facilitators		

Parents who are willing to be involved in service delivery	18	*Natural inclination of the parent to be heavily involved, and willingness/desire to work on things at home…* (Participant 13)
Parents being adaptable	3	*This family is happy to try anything which makes things easy.* (Participant 63)
Parent in a similar career or field	2	*…parents are a teacher and a psychologist and I feel that she had an awareness of what she wanted from the start.* (Participant 10)

Other responses	**# responses corresponding to code**	**Example quote corresponding to code**
Vague, nondescript, or off-topic response	9	*Parents can encourage and empower their children again.* (Participant 19)
Response indicating question was not applicable to client discussed	10	
Blank response	43	

Note. Non-Blank Response *n* = 99

Theme 1: Communication and Rapport between with Parents

When participants were asked what has helped them to involve parents more in intervention, responses cited that communication and rapport building with parents was a facilitator. 23% (*n* = 23) of responses stated that the idea of allowing for and encouraging collaborative communication and correspondence with parents helped to facilitate involvement. In a similar vein, 5% (*n* = 5) of responses cited building a professional, trusting relationships with parents as a facilitator. Participants detailed that allowing for an avenue of communication with parents both in and outside of sessions led to the possibility for information around parent desires and concerns relating to the intervention process to be discussed. These collaborative discussions with parents also allowed for discussion of contextualised information relating to the intervention, client, and the family, such as progress seen outside of consultations and consistent updates to the family's life that may lead to adaptations of intervention content and structure.

12% (*n* = 12) of responses stated that working in a team with parents by encouraging and supporting their attendance in consultations and involvement within session activities was seen as a facilitator. Responses detailed that support was provided for parents by providing adequate modelling and opportunities for imitation of methods utilised within intervention. This was described to be beneficial both in supporting the development of parents' skill sets relevant to the intervention targets, as well as providing an environment where parents can feel empowered to make a difference within their child's intervention.

4% (*n* = 4) of responses detailed a range of practices in which session information and set tasks were adapted and simplified to suit parents. These responses included chunking information provided to parents within consultations into important points, setting simple tasks that require minimal time and effort on behalf of the parents to complete, allowing for longer consultations in order to move at the family's pace, and providing clear and simple explanations for intervention strategies.

Theme 2: Service Delivery Practices as Facilitators

Participants suggested a range of aspects to service delivery practice that they identified as facilitators to parental involvement within intervention. 12% (*n* = 12) of responses indicated that adapting location of consultations such as scheduling sessions within family's homes or within clinic allowed parents to more frequently be present for intervention sessions. Responses detailed that allowing for parents to choose the location and time of sessions further supported their attendance. Participants who stated their consultations were primarily set at school detailed that barriers to parental attendance could be alleviated by working with schools to allow for parents to be on-site during sessions, as well as scheduling catch-up consultations with parents during school holidays. 4% (*n* = 4) of responses stated that company policies and the setting of expectations that parental attendance is required within consultations was also stated to be a facilitator to increased parental involvement.

Theme 3: Parent Characteristics or Behaviour as Facilitators

Responses cited parent characteristics and behaviour such as being self-motivated (18%, *n* = 18), and holding a proactive and flexible attitude to their own involvement (3%, *n* = 3) as key facilitators to increased parental involvement. Responses detailed were stated to allow for implementation of home activities to be seamless and consistent, as well as contribute highly to honest and open discussions around progress being made within intervention. 2% (*n* = 2) of responses stated that parents being in similar fields to speech-language pathology, such as teaching or psychology, allowed these parents to hold an elevated level of understanding and awareness of what was able to be achieved through intervention.

Discussion

The purpose of this study was to explore how Australian SLPs involve parents in paediatric speech and/or language intervention funded by the NDIS. The NDIS is a marketised structure introduced in 2013 where families are seen to gain increased choice and control over how allocated funding is spent on products and services. Previous research has suggested that within allied health service provision under the NDIS, there has been a cultural shift in the perception of costs and value of allied health workers' own work (Foley et al., 2020). There have been no studies to determine how working with children whose speech and/or language intervention is funded by the NDIS influences parental involvement.

The current study therefore investigated self-reported practices of parental involvement held by the target demographic. This was done through a nationwide online survey comprising demographic information, Likert scale statements on a range of practices of parental involvement, and questions regarding their practices of parental involvement with parents of the three most recently seen children whom have access to NDIS funding. Participants were also asked to report their perceived barriers and facilitators regarding parental involvement. Results from the survey were analysed using descriptive statistics and thematic analysis. The survey had a submission rate of 69% (*n* = 72) and included information regarding practices to facilitate parental involvement, and perceived barriers and facilitators of further parental involvement relating to 100 paediatric NDIS-funded clients. A summary of the study's findings in relation to the research questions proposed will be detailed below. Following this will be a discussion of results in relation to previous literature.

Summary of Main Findings

Research Question 1

Do paediatric SLPs working with children whose speech and/or language intervention is funded by the NDIS believe they utilise practices that aim to facilitate parental involvement?

The majority of applicable responses to each Likert scale statements were selected to be either agree or strongly agree. These statements related to various components of service delivery practices that were seen to facilitate parental involvement within speech and/or language intervention. Mean average scores for all Likert scale statement responses were 4.44 (range = 4.15 - 4.59). Only the statement regarding providing information to parents who were not present in intervention sessions had responses indicating the statement was not applicable (*n* = 10, 14%).

Research Question 2

Are there any characteristics of SLPs that influence if or how they facilitate parental involvement in speech and/or language intervention funded by the NDIS?

Five instances of significance were identified across two demographic factors: Participants who selected DECD as a work setting, when compared to participants who did not select DECD as a work setting, were reported to have a significantly lower level of agreement for the following statements:

- I encourage parents/caregivers to be present during my intervention sessions
- I involve parents/caregivers in goal-setting discussions for their child's intervention
- I provide information to parents/caregivers so they are made aware on what has been happening in intervention sessions in which they are not present
- If the parent/caregiver attends the session, I allow some time to discuss details relating to the intervention (e.g., the plan of the day's intervention, intervention progress, feedback from parents relating to intervention)

The demographic factor of years provided intervention for clients with speech and/or language disorders as an SLP was significantly positively correlated with statement 3: I typically set home activities for parents/caregivers to complete with their children between intervention sessions.

No significance was found with chosen demographic factors for the other Likert scale statements.

Research Question 3

What specific practices do paediatric SLPs utilise to facilitate parental involvement in speech and/or language intervention funded by the NDIS?

Participants detailed a range of practices utilised to facilitate parental involvement within NDIS-funded paediatric speech and/or language intervention. When participants were asked the ways in which they encouraged the attendance and involvement of parents within intervention sessions, practices relating to communicating with parents, such as engaging parents in conversation within intervention sessions and allowing for regular correspondence outside of consultations were commonly stated within responses. Alongside this, responses also commonly cited components of service delivery practices such as holding intervention sessions at a convenient time and/or place for parents and requiring or strongly suggesting parental attendance as facilitators to parental attendance and involvement.

In response to asking participants the ways in which they set and followed up on home activities for the parent to work on between intervention sessions, responses stated that implementation and following up of activities were commonly discussed in-person and through out-of-clinic correspondence. Parents' implementation of home activities was cited to be facilitated through components of practice such as practising home activities within intervention sessions, and facilitating the implementation of home activities in family routines and natural settings.

Responses discussing the ways in which participants have allowed the parent to discuss their opinions relating to the goals of intervention commonly stated that collaborative discussions where parents were encouraged to share both their opinions on relevant goals and information held as the experts on their child helped facilitate parental involvement in this domain. Alongside these, responses cited facilitation of goal-setting discussions to be done through allowing for goal-setting discussions to take place such as by setting routine meetings with parents to discuss goals, and allowing for goals to be a regular discussion topic in consultations.

Responses describing how participants have maintained correspondence with parents commonly cited in-person conversations and correspondence out of sessions such as through phone calls, emails, and text messages as ways to provide information and allow for feedback and queries from parents.

Research Question 4

Do paediatric SLPs believe there to be barriers that prevent them from further involving parents within paediatric, NDIS-funded speech and/or language intervention, and, if so, what are the barriers?

77% (*n* = 76) of responses indicated that there were perceived barriers to further parental involvement within the NDIS-funded speech and/or language intervention for children discussed. These barriers primarily centred around the child's family, such as through insufficient time capacity of parents, parents resisting engagement in service delivery, and personal factors of parents that prevent or impede them from being involved in intervention service delivery. Barriers arising from SLPs were discussed in 5% (*n* = 5) of responses, such as SLPs choosing not to engage the discussed child's parents in intervention, and SLPs lacking confidence or not feeling comfortable in involving the parent in intervention. A workplace barrier of working within a school was discussed in 4% (*n* = 4) of responses

Research Question 5

Do paediatric SLPs believe there to be facilitators that assist them in further involving parents within paediatric, NDIS-funded speech and/or language intervention, and, if so, what are the facilitators?

90% (*n* = 89) of responses indicated that there were facilitators of further parental involvement within the NDIS-funded speech and/or language intervention for children discussed. 44% (*n* = 44) of total responses stated facilitators relating to communication and rapport between SLPs and parents. These responses included codes of communication and correspondence with parents, encouraging family attendance and participation within intervention, building a professional relationship with parents, and adapting session information or content to suit parents' communication styles. 20% (*n* = 20) responses cited utilising a service delivery structure that facilitates parental involvement. More specifically, these responses detailed facilitators as adapting session times or settings to suit parent, utilising structured family-centric intervention programs, and working under an organisational structure that requires or encourages parents to attend intervention consultations. 23% (*n* = 23) responses indicated that parent characteristics, such as being willing to be involved in service delivery, being adaptable, and working in a similar career or field, were seen to be facilitators to further parental involvement.

Facilitation of Parental Involvement

Research Question 1

Do paediatric SLPs working with children whose speech and/or language intervention is funded by the NDIS believe they utilise practices that aim to facilitate parental involvement?

The majority of applicable responses to each Likert scale statements were selected by participants to be either agree or strongly agree. These statements corresponded to a range of potential service delivery practices that support the use of a family-friendly service delivery model. The high number and consistency of agree and strongly agree responses across all provided statements suggests that paediatric SLPs believe they utilise a diverse range of practices that align with family-friendly service delivery when providing speech and/or language intervention for children funded by the NDIS. Literature has identified that there has been a variation in proportions of SLPs reporting parental involvement in intervention sessions for SSDs in recent years. For example, Watts Pappas et al. (2008) stated that only 35% of Australian SLPs reported parental involvement in intervention sessions, while

Oliveira et al. (2015) reported that 60% of SLPs involve parents in intervention. These two studies contrast with the findings of studies where higher percentages of parental involvement were reported, such as Joffe and Pring (2008) citing that use of parents was reported to be done often or always by over 75% of participants, and Sugden et al. (2018)'s finding of 89% of participants reporting parental involvement. This current study, where responses indicated that parental involvement is typical and commonplace across a range of practices, aligns closer with those of reported higher percentages.

While all studies used a self-reported survey exploring similar client populations, it is important to note the differences in the research cited to identify potential explanations for variations in reported levels of parental involvement. There were differences in participant country (i.e., Oliveira et al. (2015) involving SLPs in Portugal, Joffe and Pring (2008) involving SLPs in the UK, and both Sugden et al. (2018) and Watts Pappas et al. (2008) involving SLPs in Australia. Naturally, differences in the wording of the relevant survey questions between these studies was also identified. In exploring the two cited studies closest to the current study (these being Sugden et al. (2018) and Watts Pappas et al. (2008)), there was a large increase in reported parental involvement over the 10 year gap between these two publications. The current study also identified a high level of parental involvement. This may allude to there being an increase in the use of family-friendly service delivery models in phonology-based intervention provision. Sugden et al. (2018) identifies a potential hypothesis for this to be an increase in SLPs' awareness and use of the International Classification of Functioning Disability and Health Children and Youth Version (ICF-CY; World Health Organisation, 2007), which is largely founded on family-friendly, holistically-centred management of children in health settings. Another significant development of allied health service provision is the nationwide rollout of the NDIS, arguably the largest disability reform in recent decades (Kendrick et al., 2017). Given that participants within the current study were asked to report only on their level of parental involvement with clients whom hold NDIS funding, the high levels of practices to facilitate parental involvement suggest that these practices can be associated with NDIS-funded paediatric SLP practice.

It is important to note that the author was not able to find any literature exploring the frequency of SLPs involving parents when providing language intervention, and thus the literature referenced within this section can only be attributed to parental involvement practices for intervention for SSD.

Parental Attendance and Involvement in Intervention Consultations

The majority of responses to Likert scale statements relating to parental attendance and involvement within intervention consultations were selected to be either agree (present: *n* = 13, 18%; involved: *n* = 20, 28%) or strongly agree (present: *n* = 48, 67%; involved: *n* = 41, 57%). These findings align with previous relevant literature, including within a survey of by McLeod and Baker (2014), where 82.5% of Australian paediatric SLPs working with children with SSDs were reported to always or usually encourage parents to observe within consultations, and 82.6% reported to always or usually involve parents within consultations. Similar results were found in surveys by Watts Pappas et al. (2008) and Sugden et al. (2018), where 80% and 79.7% of paediatric SLPs (respectively) stated that parents were always or usually present within intervention sessions. However, results regarding parental involvement within consultations contrast with relevant findings in Watts Pappas et al. (2008), where only 35% of SLPs stated they always or usually involved parents within intervention consultations. It is important to note that previous literature in which the current study's results are compared to differ in intervention provided, where previous literature cited only explores parental involvement of children with SSD, while the current study explores children with both SSD and language disorders.

Setting and Following up of Home Activities

Both Likert scale statements relating to home activity usage within service delivery had the majority of applicable responses as either agree (setting home activities: *n* = 18, 25%; following up on home activities: *n* = 30, 42%) or strongly agree (setting home activities: *n* = 37, 51%; following up on home activities: *n* = 39, 55%). Relevant previous literature has stated that home practice has been established as the primary strategy SLPs utilise in involving parents in intervention for this field (Watts

Pappas et al., 2008). In exploring levels of frequency of setting home activities in intervention for children with SSD, various studies have reported high percentages of Australian SLPs who often set home activities within their service delivery. For example, Watts Pappas et al. (2008) and Sugden et al. (2018) reported that approximately 95% of paediatric SLPs set home activities for parents to complete with their child, while McLeod and Baker (2014) reported that 96.7% of participants stated homework activities were always or usually given during intervention for SSD. It appears that previous studies with similar research questions and methodologies appear to generate similar results to the current study regarding the proportion of participants who set home activities.

There were slight discrepancies between responses of each Likert scale statement relating to home activities, with responses to the Likert scale statement relating to typically following up on home activities having a lower mean average score (4.15) than that of responses for the Likert scale statement relating to setting of home activities (4.28). This may suggest that while both setting and following up on home activities were commonly reported within this study's participants, following up on home activities may be less common. A similar phenomenon was explored in Tambyraja (2020), where 60% of paediatric SLPs responded stating they provided home activities always or most of the time, while 43.5% of the same population reported that they followed up with parents regarding home activities always or most of the time. The findings seen in Tambyraja (2020) correspond with findings seen in this current study. Tambyraja (2020) suggests that factors such as caseload size may impact on SLPs' capacity and willingness to follow up on home activities previously set, however this cannot be examined with the current study's data as caseload sizes were not a part of the survey instrument.

Collaborative Goal-Setting with Parents

The vast majority of participants either agreed (*n* = 15, 21%) or strongly agreed (*n* = 46, 64%) that they involve parents in goal-setting discussions for their child's intervention. These findings align with those of similar studies, with Sugden et al. (2018) reported that 77.5% of SLPs surveyed stated they involved parents of children with SSD in goal selection, and Watts Pappas et al. (2008) reporting 67% of participants involved parents in goal selection. Looking at the publication dates of these studies all was the current study, it appears as though there is a rising trend of presence of goal-setting discussions over time. These studies, alongside this current study, share similar methodologies of self-reported survey questions regarding practices of parental involvement, so these findings are logically able to be compared to one another. However, the former two studies exclusively explored children with SSD, while this current study explored children with both speech and language disorders, which may explain some variance between reported percentages of goal-setting between the studies. Alongside this, the current study asked participants to respond to the Likert scale statements with only their NDIS-funded clients in mind, whereas cited literature did not distinguish participant client base by funding model. It may be the case that the progressive rollout of the NDIS from 2013 has had an influence on the frequency of goal-setting practices within paediatric service delivery, as SLPs who often work with children whose intervention is funded by the scheme may provide a document of goals previously set in consultation the NDIS planner, which has the potential to support an initial collaborative discussion around goals.

Impact of Participant Characteristics on Facilitation of Parental Involvement

Research Question 2

Are there any characteristics of SLPs that influence if or how they facilitate parental involvement in speech and/or language intervention funded by the NDIS?

School-Based SLPs and Parental Involvement

Participants who worked for the DECD (a school-based government branch where employed SLPs work with pre-school and school-aged children) had significantly lower agreement with the following Likert scale items compared to non-DECD employed participants: Encouraging parents to be present during intervention sessions; involving parents in goal-setting discussion; providing relevant information to parents for sessions in which they are not present; and allowing time to discuss details relating to intervention if the parent attends the session. Statistical tests conducted indicated that the aforementioned Likert scale statements had a significantly lower level of agreement for participants who chose DECD as a work setting when compared to those who did not. This suggests that practices relating to these statements occur significantly less in school-based SLPs.

There have been many studies identifying that school-based SLPs are less likely, when compared with other work settings such as private practice, to facilitate parental involvement. For example, Sugden et al. (2018) reported that school-based SLPs were significantly less likely to have a parent present within intervention consultations, or to report involving parents in goal-setting than SLPs who work in private practice or community health. A survey by Watts Pappas et al. (2008) stated that school-based SLPs reported to have fewer interactions with parents than SLPs who work in private practice or hospitals. In a study exploring the frequency and nature of communication between school-based SLPs and parents of children on their caseloads, Tambyraja et al. (2017) identified that 8.6% of parents were never contacted, and communication with those who were contacted varied considerably in the frequency of occurrence. While there were variances in frequency of communication, the nature of communication was found to be not erratic, as approximately 66% of communication was arranged through a homework folder. This finding may give insight into why there was no statistical significance found between school-based SLPs and non-school-based SLPs of Likert scale statements relating to setting and following up of home activities.

Previous literature has explored the range of barriers to further parental involvement that school-based SLPs face. Studies have often identified workplace barriers that school-based SLPs face when aiming to facilitate parental involvement, such as inflexible forms of service delivery able to be offered to clients, time constraints and scheduling challenges, and high caseloads (Hutchins et al., 2010; Katz et al., 2010; Mandak & Light, 2018; Watts Pappas et al., 2008). Alongside this, the potential for face-to-face communication between school-based SLPs and parents is compromised by the rarity of occurrence in direct, face-to-face contact (Tambyraja et al., 2017). While these barriers may not be the absolute reason for the current study's findings, they assist in illustrating the difficulties school-based SLPs face, which may impede on facilitation of parental involvement at the same level as SLPs who do not work in education settings such as schools.

Practice Years Providing Paediatric Speech and/or Language Intervention and Parental Involvement

The demographic factor of years provided intervention for clients with speech and/or language disorders as an SLP was significantly positively correlated with the Likert scale statement relating to setting of home activities. Some studies have shown positive relationships between years of relevant experience and similar practices to setting of home activities. Sugden et al. (2018) reported that more experienced SLPs were significantly more likely to report providing a range of training opportunities in more areas, such as how to collect data at home, and how to integrate therapy into everyday situations or routine activities. Watts Pappas et al. (2008) has also suggested that SLPs with more years of experience may feel more comfortable in reaching out to parents regarding home activities when compared to clinicians with less experience. In contrast, Oliveira et al. (2015) found no correlation between involvement of parents and years of experience.

While the findings from previous relevant literature described do not align perfectly with the significant finding identified within the current study, findings suggest that SLPs with more years of relevant experience are able to utilise a wider range of tools and be more confident in a range of areas, which may include setting of home activities, when compared with clinicians with fewer years of relevant experience. Previous literature has supported this idea, with Roulstone (2012) identifying that experienced SLPs, when compared to newly qualified SLPs, do not find translating and applying theoretical knowledge to complex clinical situations as difficult. Alongside this, Joffe and Pring (2008) has identified that confidence of choosing appropriate interventions increased with years of experience.

Specific Practices of Parental Involvement

Research Question 3

What specific practices do paediatric SLPs utilise to facilitate parental involvement in speech and/or language intervention funded by the NDIS?

SLPs Facilitating Communication and Correspondence with Parents

Communication between SLPs and parents has been described as a core component of family-friendly practice throughout the intervention journey (King et al., 2015; Klatte & Roulstone, 2016; Sugden et al., 2018; Verdon et al., 2016; Washington et al., 2012). It is therefore important for SLPs to incorporate communication as a constituent of working with parents if they wish to utilise family-friendly service delivery models within their practice. Participants within this study commonly reported to facilitate communication and correspondence with parents of children with whom they work. Responses generally indicated that communication with parents was utilised to discuss relevant information with parents such as the methodologies and rationales behind intervention strategies practiced within consultations. Literature supports this information to be discussed, as parents have been seen to desire clinicians to provide information that allow for themselves to hold a better understanding regarding reasoning behind intervention (Auert et al., 2012; Edwards et al., 2016). Responses indicated that correspondence with parents was also commonly enabled and encouraged within service delivery, a component of practice which parents have been shown to see as valuable (Cowpe et al., 2014; Forsingdal et al., 2014).

Communication Regarding Roles in Intervention. Paediatric SLPs may hold a great deal of expert information regarding the range of service delivery models that can be utilised and the benefits and drawbacks of each, and various ways in which parents can play a role in facilitating delivery of intervention. As it is likely that parents accessing services do not have this same depth of knowledge, clinicians hold a responsibility to initiate discussions exploring the breadth of possible ways in which parents can be involved in intervention to allow for the most appropriate adaptation of service delivery to each individual family (Carroll, 2010).

SLPs prioritising communication within their service delivery can also enable parents to share opinions regarding their own level of involvement and how they wish to be a part of the intervention delivery process if at all, leading to the potential for equal collaboration between both parties. However, participants within the current study rarely stated that communication was specifically utilised to engage parents in collaborative planning and discussions around roles of both parties. Omitting discussions of desired roles within communication with parents sets the SLP as the de facto primary decision maker within service delivery, leading to parents likely to adopt less dominant roles such as observer within consultations and implementor of home activities outside of consultations (Watts Pappas et al., 2016). Parents may be reluctant to interfere within the intervention process as they often see clinicians, rather than themselves, as the fixer of problems (Carroll, 2010; Watts Pappas et al., 2016). Reluctance may also stem from a lack of knowledge, as parents may begin their child's intervention journey with little understanding of what clinicians expect of them, as well as what to expect from the SLP (Davies et al., 2017; Forsingdal et al., 2014; Glogowska, 2000).

Previous literature has shown support for SLPs engaging parents in discussions of desired roles. For example, Sugden et al. (2019) identified that integrating families in the planning process of intervention may assist speech-language therapists to identify parent's expectations of roles and adapt to these expectations. This may then potentially increase both parents' satisfaction of the intervention services and engagement with services (Glogowska & Campbell, 2004; Lyons et al., 2010). In comparing previous literature to the current study, the lack of participant responses including communication of parent and SLP roles within intervention service delivery suggests that this was not a component of practice within service delivery.

Communication Regarding Goal-Setting Discussions. Participant responses indicated that goal-setting discussions were a primary component of communication with parents. Responses often detailed that parents were encouraged to engage and contribute to goal-setting discussions as the role of expert and advocate of their child, providing information such as challenges they believe they and their child frequently face, and what they wish their child to achieve from intervention. Literature has suggested that parents commonly adapt these roles when engaging in family-friendly service delivery models (Glogowska & Campbell, 2004; McAllister et al., 2011). In support of parents being integrated into goal-setting discussions, Davis et al. (2002) has stated that parents are more likely to participate in intervention when actively engaged in goal setting. This suggests that the engagement of parents in goal-setting discussions as reported in participant responses can facilitate parental involvement within intervention.

In a study exploring parent perspectives on occupational therapy and physiotherapy services, Egilson (2011) identified that parents see a range of components relating to increased communication as potential areas of improvement within paediatric allied health service delivery, including clinicians providing explanations on how goals can be transferrable within their and their child's day-to-day life. Siebes et al. (2007) has identified similar findings, highlighting the importance of goals to be applicable to daily routines and activities. Participant responses within this study indicated that providing of expert information was a primary component of their communication with parents, often seen to be through topics such as why specific intervention targets have been chosen, and providing rationales relating to home activities. The comparison between parents' findings in literature discussed and this study indicates that paediatric SLPs report using a service delivery model in which communication with parents is a primary constituent, and that what SLPs discuss with parents aligns with parents' desires of communication content within service delivery. However, this cannot be validated as parents were not surveyed within this study.

Utilising Service Delivery Practices to Facilitate Parental Attendance and Involvement

Participants often stated that they aimed to adapt time and setting of sessions to suit parents' schedules may indicate that parents are able to influence these aspects of participants' service delivery practices. Parents have been seen to value SLPs aiming to give flexibility to consultation times (Cowpe et al., 2014; Washington et al., 2012). This practice being possible may come from an elevated level of choice and control through holding NDIS funding, as parents who may desire service delivery to fit within their schedules may then seek services that can fulfil this wish. Literature supports this notion, as increased choice and control held by participants in marketised services allows them to influence how intervention is delivered by utilising funding on desired services (Williams & Dickinson, 2016). Adapting setting of consultations to suit parents' schedules allows for parents to be able to attend consultations more frequently such as through alleviating workplace barriers of consultations being held in schools where parents may not be able or allowed to attend. With an increase in the potential for parental attendance comes an increase in parents being able to spend more time being active participants within consultations (Marshall et al., 2017), leading to the possibility for other components of family-friendly service delivery to be implemented.

Participants detailed that facilitating parental attendance and involvement was done so by encouraging parents to engage in intervention activities within consultations. In line with this, previous research has identified that a core way that SLPs implement family-friendly models within service delivery is through inviting parents to participate within intervention sessions (Marshall et al., 2017) and providing opportunities for parents to be actively involved within these sessions (Washington et al., 2012). More specifically, SLPs help parents to become more involved by showing parents how to be involved in specific intervention activities, and allowing for parents to practice these strategies within sessions (Gibbard & Smith, 2016). These findings align with those of the current study, identifying that the current study's participants were able to maintain this family-friendly practice with parents of NDIS-funded clients.

Previous research has indicated that parents can be taught how to utilise strategies to support their child's speech and language development (Roberts & Kaiser, 2011; Sugden et al., 2019). Parents feeling confident in assuming the role of implementor of these support strategies is often preceded by SLPs supporting and enabling parents to hold this role (Davies et al., 2017). Participant responses indicated that parents were often encouraged to hold roles of observer and collaborator within intervention activities conducted in consultations. Parents were also stated to be supported in the implementation of taught strategies through the use of consistent and continuous coaching within participants' service delivery practices. Speech-language pathology practices reported by participants in this current study is therefore consistent with evidence found in previous relevant literature.

Facilitating Parents' Implementation of Home Activities

Delivery of home practice has been shown to be a frequent method of facilitating parental involvement within intervention service delivery (Sugden et al., 2018). The same study also identified that home practice activities given to parents were typically ones which were easy to set up and administer, such as completing worksheets and games relevant to the intervention goals. Similar findings were identified within participants' responses in this study, with 76% of participants either agreeing or strongly agreeing with the Likert scale statement relating to typically setting home activities for parents to complete, and 82% agreeing with the statement relating to following up of home activities. Responses also commonly detailed that parents were given easy to use home activity resources, aligning with findings seen in (Sugden et al., 2018).

Literature has suggested that parents seeking to implement home practice is met with a range of barriers regardless of their child's disability, including parents finding the confidence to attempt home practice, as well as being able to set aside time to complete home activity tasks (Sugden et al., 2019). These barriers may compromise the frequency and level of success parents complete home activities, potentially leading to a loss of positive outcomes associated with the completion of home activities (Allen, 2013; Tosh et al., 2017). Responses within this study detail that discussion regarding how home activities can be adapted to family's day-to-day routines could have led to home activities being less intensive on time and therefore less burdensome to implement within parents' schedules. Both SLPs and parents have been shown to see the notion of fitting intervention into families' routines as important (Carroll & Sixsmith, 2016; McAllister et al., 2011). Alongside this, previous research has identified that SLPs supporting parents to be involved in home activities have facilitated a sense of ownership parents hold over the intervention process. This increased ownership then holds potential to lead to parents taking on a more active role in setting the next steps for intervention in relation to progress made in environments outside of consultations (Bowen & Cupples, 2004). Despite parents acknowledging difficulties in implementing home practice, those who felt they were involved in intervention were motivated to find time to attempt intervention practice within everyday life (McAllister et al., 2011).

Previous research has also identified that parents may have difficulties in remembering to conduct home practice outside of consultation sessions (Goodhue et al., 2010; Thomas et al., 2018; Watts Pappas et al., 2018). While this was not identified as a barrier within participants' responses, participants often stated that they aimed to follow up on home activities at the start of each session to assess parents' progress and discuss any potential adaptations to the home activities provided. Alongside this, parents were said to be able to contact participants between consultations to query aspects of the home activities set. These two components of participants' service delivery indicate that home practice was sought to be a frequent and prominent aspect of intervention which may have influenced parents being able to remember to complete home activities.

Participants stated that education, guidance and support was given to parents on home activity implementation through trialling of the activities within consultations. Literature has stated that comprehensive and ongoing training is a crucial aspect for successful parent-delivered home practice interventions (Lawler et al., 2013; Tosh et al., 2017), and a lack of comprehensive training may create barriers of parents not feeling as though they hold the skills or motivation to conduct home practice activities (Melvin et al., 2020; Sugden et al., 2019). While it can be argued that the level and intensity of parent training detailed within responses would not be deemed comprehensive, participants may have felt that a high level of parent training or guidance was not warranted, as the home activities provided were often said to be easy to administer.

Barriers to Parental Involvement

Research Question 4

Do paediatric SLPs believe there to be barriers that prevent them from further involving parents within paediatric, NDIS-funded speech and/or language intervention, and, if so, what are the barriers?

Parent-Centric Barriers

Participants reported on a range of barriers they believed to compromise their level of parental involvement. Sugden et al. (2018) stated that SLPs faced parent-related barriers of parent capability, availability and attendance at sessions. Similar findings were reported within responses from this study's participants, with barriers reported being primarily centred on parents' time capacity and personal factors compromising their capability and attendance within intervention sessions. Participants stated that parents' insufficient time capabilities were often due to work commitments such as work schedules or amount of work hours that made parental involvement infeasible, as well as family commitments such as being preoccupied with other children within consultations, or needing to attend to other children's requirements throughout the day. Previous literature has stated that barriers to parent capacity have resulted in difficulties around being able to make time for home practice activities within daily schedules and often not remembering to conduct home practice (Goodhue et al., 2010; Thomas et al., 2018; Watts Pappas et al., 2016).

Literature has stated that parents can have the capabilities to be taught how to utilise strategies to support children's development in speech and language (Roberts & Kaiser, 2011). However, barriers to capability outside of time constraints may compromise the potential for further parental involvement. These barriers, such as parents not holding adequate technology to support home activities, parents managing their own anxiety, separated parents, and financial difficulties were stated within responses. Personal barriers were not found to be discussed within previous literature, although may be alluded to under the label of parent capability in Sugden et al. (2018) and Watts Pappas et al. (2008). The NDIS is able to mitigate some personal capacity factors such as through allowing for grant applications for technology that is meaningful and relevant to intervention provided, however this may not have been appropriate or known to the parents or participants of responses detailing insufficient technology as a barrier. While the scheme funds relevant services and equipment, financial barriers may still be prevalent, as external costs such as those arising from parents' transportation to and from sessions are not able to be covered by the scheme's funding.

Parental barriers of resisting engagement within service delivery and not agreeing or believing in the intervention methodology provided within the service delivery framework were also reported within responses to potentially impede further parental involvement. A similar finding of parental beliefs misaligning with family-friendly service delivery models was reported in Sugden et al. (2018), where SLPs stated that parents' expectations regarding their role in the service delivery model was a barrier they had faced when aiming to train parents on how to complete home activities for SSDs. Roughly a quarter of SLP participants in Newbury and Sutherland (2020) also reported similar findings, citing that teaming with adults was a barrier in measurement of child-directed speech. Findings in Mandak and Light (2018) also cited similar parental barriers, where participants cited parent desires for provision of AAC services that did not align with professional recommendations. It is important to note that while participants reported these as parental barriers, disagreements and misalignments can be seen as barriers generated in equal part by the SLP. Parents whom participants have cited as being resistant to engaging in service delivery may feel as though parents are less engaged as a result of their opinions or desires regarding intervention not aligning with the clinician. As such, rather than identifying disagreement as a barrier SLPs who utilise family-friendly service delivery models should identify the reasons for the disagreement alongside parents' perspectives (Mandak & Light, 2018).

As the survey's Likert scale indicated that the majority of participants agreed or strongly agreed with the statements provided, it can be assumed that the service delivery model utilised by participants tended to incorporate aspects of family-friendly models of intervention. Parents sometimes view SLPs as leaders within intervention (Davies et al., 2017; Watts Pappas et al., 2016), and so may not have beliefs that align with themselves being involved so heavily as would be typical in family-friendly models of intervention. Parents have been seen to be reluctant in engaging in intervention as they may feel they interfere in SLPs' intervention processes, whom they see as the 'fixer' of problems within intervention. They also may not feel comfortable initiating discussions with the SLP regarding their wishes and ideologies due to clinicians being seen by parents as the leader of intervention (Davies et al., 2017; Watts Pappas et al., 2016). As a result, parents may resist engagement through passive measures such as not attending sessions or maintaining a belief that the traditional clinician-led service delivery model is the most effective model of intervention for their child.

SLP-Centric Barriers

A small number of responses detailed that participants felt as though they lacked confidence in their ability to facilitate parental involvement within their service delivery; a barrier also identified in (Sugden et al., 2018). Previous literature has detailed SLP-related barriers to parental involvement which have not been reported on by participants in this study. One set of barriers often seen in relevant literature is that of constraints around time, capacity, and access to research in SLPs' work (Hoffman et al., 2013; Iacono & Cameron, 2009; Mandak & Light, 2018). SLPs have been reported to be subjected to time-related barriers that impact their ability to allocate levels of parental involvement desired by both themselves and the parents with whom they work (Joffe & Pring, 2008; Mandak & Light, 2018). Participants were not unaware of these constraints having the potential to hold significant constraint to parental involvement, as many responses reported parents experiencing these constraints as a barrier to their further involvement. While this may suggest that the NDIS lessens these constraints in SLPs' working lives, this assumption contrasts with findings in recent literature describing some NDIS providers having increased bureaucratic burden resulting from NDIS compliance requirements (Foley et al., 2020).

Research has explored parents' ideas of ways in which SLPs can improve aspects of their service delivery. Families participating in Dyke et al. (2006) suggested that allied health workers could better support families involved in services by increasing levels of sharing of information to families, facilitating greater involvement of families within service delivery, and providing support to families at a higher level than is what is required when simply providing intervention. Similar suggestions were found in Egilson (2011), with participants also highlighting that increased efforts to take initiative in discussing topics such as goal-setting and providing expert information held by the speech-pathologist would be desirable by families.

These suggestions by family participants within these studies may provide suggestions of SLP-centric barriers that parents believe to have an impact on parental involvement. Participants did not state or allude to these suggestions within their responses.

Workplace-Centric Barriers

A small number of participants stated that there were difficulties in facilitating parental attendance in intervention provided within school-based settings due to constraints imposed by schools, a finding also documented in Sugden et al. (2018). All participants who reported these constraints were working in private practice, and no participants who stated they work for the Department of Education and Child Development (DECD) and thus within the school system cited school-based settings as a barrier to parental involvement. This may indicate that SLPs working within each workplace may view parental involvement differently. Those working in private practice may view parent attendance and in-person involvement in session activities as core aspects to parental involvement, and therefore may view school-based settings not allowing for parental attendance to be a barrier to parental involvement. Contrastively, regular parental attendance may not be feasible within the service delivery structure for SLPs employed by the DECD, and thus other avenues to facilitate parental involvement such as home activities or correspondence may be seen as core practice of parental involvement. Literature suggests that SLPs primarily working in educational settings such as that of the DECD are not as likely to engage in parent training and parent attendance of sessions (Sugden et al., 2018; Tambyraja et al., 2017; Watts Pappas et al., 2008).

Facilitators of Parental Involvement

Research Question 5

Do paediatric SLPs believe there to be facilitators that assist them in further involving parents within paediatric, NDIS-funded speech and/or language intervention, and, if so, what are the facilitators?

Communication and Rapport Building with Parents as Facilitators

Collaborative and Open Communication with Parents. When participants were asked what has helped them to involve parents more in intervention, the majority cited that their communication and rapport building with parents was a facilitator. Out of these responses, the majority centred around the idea of allowing for and encouraging collaborative communication and correspondence with parents. Previous literature has supported the notion that collaborative discussion and increased avenues of communication between SLPs can act as a catalyst for increased parental involvement. It has been suggested that allowing for families to communicate information throughout the planning process of intervention may increase both parents' satisfaction of the intervention services and engagement with services (Glogowska & Campbell, 2004; Lyons et al., 2010; Sugden et al., 2019). Allied health workers who prioritise rapport building hold the potential to act as sources of support for parents (Kruijsen-Terpstra et al., 2014), as parents see developed relationships with these allied health workers as supportive connections where their concerns can be addressed and validated (Freuler et al., 2014). In support of this, a parent in a study by Cowpe et al. (2014) stated that the interpersonal skills held by the SLP were as important as their clinical intervention provision skills.

Two-way communication between parents and SLPs has been described as being at the heart of practice (King et al., 2015), with a number of studies identifying that communication, namely listening to parents, as being a key to moving forward within the intervention journey together (King et al., 2015; Klatte & Roulstone, 2016; Sugden et al., 2018; Verdon et al., 2016; Washington et al., 2012). Parents across a number of studies have reported to highly value themselves being listened to by the SLP with whom they work (Carroll & Sixsmith, 2016; Forsingdal et al., 2014; Mathisen et al., 2016). Clinicians have also been shown to see value in this practice, stating that it allows for further engagement of parents within intervention King et al. (2015). These same participants also identified that listening to parents helped to understand the family context, and that this was important in being able to individualise service delivery to families. Participants within the current study had similar reports to literature discussed, citing that open communication was at the core of facilitation of parental involvement, as well as parents sharing concerns that arise outside of consultations makes it easier to ensure that intervention reflects families' concerns and priorities.

Encouraging Family Attendance and Participation Within Intervention. Participants stated that working in a team with parents by encouraging and supporting their attendance in consultations and involvement within session activities was seen as a facilitator. Previous literature has supported these practices as facilitators, with Lawler et al. (2013) stating that parents hold the potential to further increase the effectiveness of intervention if they are supported by SLPs to be put into a more active role within the service delivery. Sugden et al. (2018) has also supported this, suggesting that SLPs who aim to involve parents in intervention for SSDs seek to improve outcomes of intervention and empower or educate families. Literature has identified that when parents participated in intervention, they felt as though they were able to communicate their opinions regarding what was not working in terms of intervention service delivery (Edwards et al., 2016). The comparison between participant responses in the current study and findings from previous literature cited identifies that encouraging parent attendance and participation can be a strong facilitator of parental involvement within service delivery.

Building a Professional Relationship with Parents. Participants within the current study reported that establishing a trusting relationship over time with parents of children with whom they work was seen to be a facilitator of parental involvement. While responses indicating this were largely brief and did not provide any further explanations as to why relationship building with parents was seen to be facilitators, previous research can help to build a context of how relationship building with parents can be beneficial in family-friendly service delivery. For example, parents have been shown to be hold favour in working with clinicians who showcased positive qualities, such as care, compassion, and friendliness (Auert et al., 2012; Cowpe et al., 2014; Mathisen et al., 2016; Washington et al., 2012;

Watts Pappas et al., 2016). Parent participants in a study by Marshall et al. (2017) stated that they wanted SLPs to take time to get to know both themselves and their child. This research indicates that parents seem to value SLPs who prioritise establishing professional relationships that incorporate getting to know the parents and their children in a caring and compassionate manner.

Research has also shown that SLPs also see the process of relationship building as beneficial to developing an effective team with parents. An SLP participant in (King et al., 2015) stated that taking the time to build a relationship with parents increased their awareness of the ways in which they could work together. Alongside this, SLP participants in the same study stated they were able to work with parents more effectively, as they were able to anticipate how the parent would interact and engage. SLPs have also reported that the presence of a trusting relationship is instrumental when they must share confronting, difficult information with families (Reeder & Morris, 2018). As such, both previous literature and responses in this current study have identified that SLPs building rapport with parents is seen as an important component of family-friendly service delivery models to facilitate strong parent-clinician teams.

Adapting Session Information or Content to Suit Parents. Parent participants in Edwards et al. (2016) detail that they desire SLPs to provide information related to intervention, a practice that has been seen to have a direct impact on both parent empowerment and parents' ability to make informed decisions within intervention service delivery (Auert et al., 2012). More specifically, parents have been shown in literature to want information provided to them regarding methodologies and rationales behind the intervention provided (Auert et al., 2012; King et al., 2015). Participants within the current study provided similar viewpoints, stating that providing information regarding how the intervention is conducted within the practice setting was seen to be a facilitator of parental involvement. In a similar vein, responses by participants in the current study also stated that simplifying information into important points regarding intervention strategies provided to parents within consultations was a facilitator. This method of communicating has been identified to be valued by parents, with parents stating they prefer information provided to them to be minimal in specialised wording and jargon, and communicated through simpler explanations (Cowpe et al., 2014; Watts Pappas et al., 2016).

Utilising a Family-Friendly Service Delivery Framework

Participants suggested a range of aspects to service delivery practice that they identified as facilitators to parental involvement within intervention. Responses indicated that adapting location of consultations such as scheduling sessions within family's homes or within clinic allowed parents to more frequently be present for intervention sessions. Some participants also cited that allowing for parents to choose the location and time of sessions further supported their attendance. Participants who stated their consultations were primarily set at school detailed that barriers to parental attendance could be alleviated by working with schools to allow for parents to be on-site during sessions, as well as scheduling catch-up consultations with parents during school holidays. Literature has stated that parents value SLPs aiming to give flexibility to consultation times (Cowpe et al., 2014; Washington et al., 2012), and both parents and SLPs see fitting intervention into families' routines as an important aspect of intervention service delivery (Carroll & Sixsmith, 2016; McAllister et al., 2011). It is then understood why participants of the current study see this practice as a facilitator to parental involvement in that it not only increases parent presence within consultations, but also appears to be an aspect that both parties see as a positive and valued component of family-friendly service delivery.

Parents as Facilitators

Responses cited parent characteristics and behaviour such as being self-motivated, being willing to be engaged with session activities, and holding a proactive and flexible attitude to their own involvement as key facilitators to increased parental involvement being. Previous literature has explored parents' motivation within their role in intervention, stating that motivation stems from aspects of intervention such as their child's enjoyment in sessions and the progress made throughout intervention (Phoenix et al., 2019). The same article also suggests that parents are motivated to be involved in services when the service provider is committed to their case and shows genuine care and excitement for the child. Some parents also begin the intervention journey with a sense of ownership and empowerment, with Forsingdal et al. (2014) identifying that parents whom hold these perceptions can be active participants within intervention practice from the start of their child's intervention. These suggestions may indicate that while parent motivation may be self-generated by parent characteristics, the SLP can be a catalyst for parents' motivations to be involved in intervention.

Clinical Implications

Parental Involvement

This study has illustrated that implementation of components of family-friendly service delivery practices are commonplace with the study's population in aiming to facilitate parental involvement within paediatric, NDIS-funded speech and/or language intervention. SLPs who work within educational settings such as schools may find it challenging to incorporate these components into typical service delivery due to the nature of the workplace setting. As a result, use of more accessible methodologies that aim to facilitate family-friendly service delivery practice may allow for a level of parental involvement that comes closer to bridging the gap between school-based paediatric SLPs and paediatric SLPs who work in other settings such as private practice. These methodologies may include increased communication in non-face-to-face domains, as well as setting and following up of home activities through physical handouts.

Barriers to Further Parental Involvement

In light of findings of parent-related barriers to SLPs' facilitation of parental involvement, SLPs should consider how parents view the hierarchy of leadership and decision-making abilities within the service delivery model and aim to facilitate initial and regular discussions with parents around features, advantages, and benefits of implementing different intervention models outside of clinician-centric models. This may lead to both parties engaging in collaborative reflection and subsequent adaptations to roles to then facilitate implementation of a family-friendly service delivery model that is individualised and curated to both the parents and the SLP. This may lead to an increase in parents' satisfaction of and engagement with the intervention provided (Glogowska & Campbell, 2004; Lyons et al., 2010).

Findings relating to SLP-centric barriers illustrate that SLPs may not be reflecting on their own service delivery practices as deeply as they reflect on parent characteristics and behaviours. This may indicate that SLPs over-report parent-centric barriers and under-report barriers created within their own service delivery practices when assessing any areas for improvement to further increase parental involvement in intervention. This could be alleviated by engaging in reflective evaluation of service delivery practices and assessing feasibility of successfully incorporating family-friendly models of practice within the service delivery framework. With research establishing that families can hold appropriate suggestions for areas of improvement within allied health workers' practice, SLPs can facilitate discussions with parents to explore these suggestions for potential implementation.

In light of findings of parent-related barriers to speech-language pathologists' facilitation of parental involvement, speech-language pathologists should consider how parents view the hierarchy of leadership and decision-making abilities within the service delivery model and aim to facilitate initial and regular discussions with parents around features, advantages, and benefits of implementing different intervention models outside of clinician-centric models. This may lead to both parties engaging in collaborative reflection and subsequent adaptations to roles to then facilitate implementation of a family-friendly service delivery model that is individualised and curated to both the parents and the speech-language pathologist.

Directions for Future Research

Further research could be conducted to investigate how the NDIS influences paediatric SLP's practices of parental involvement for NDIS-funded clients by exploring actual practice, rather than self-reports of practice. This is recommended as literature has highlighted that self-reporting bias can result in vast differences between reports of practice and actual practice (e.g. Tambyraja et al. (2017)). Further exploratory research around individualised funding models such as that of the NDIS and how they may influence change in service delivery across a range of components of practice may assist in illuminating the range of ways in which these funding models can influence service delivery and parent satisfaction. Specific components of SLP practice to be explored are recommended to be including: frequency of intervention consultations with paediatric speech and/or language intervention, parent satisfaction with NDIS-funded SLP services, and parents' perceptions of their involvement in NDIS-funded speech and/or language intervention. This study did not explore the influence of paediatric client characteristics on parental involvement in NDIS-funded speech and language intervention. As such, this is a component of service delivery that may influence parental involvement, so is also recommended to be explored within future research.

Limitations

While a high degree of care was taken to maintain the quality of the study, some limitations to the methodology that underpinned this study led have been identified. Self-reporting bias was seen to be a key limitation in this study, as is common within these types of study methodologies (Althubaiti, 2016). As this was an online survey and responses submitted by participants were not able to be validated by information such as intervention session notes or parents' own accounts of how the participant facilitated parental involvement, it was not possible to determine if information provided by participants was factually correct or accurate to their actual practices. Self-selection bias may have also been present within the study, as SLPs who commonly involve parents may have been more motivated to participate in the study than those who do not. Social desirability bias was determined to be a potential influence on participants’ responses to the survey’s Likert scale statements, as participants may prioritise particular clients in which parental involvement has been easier to facilitate and base their agreement on the provided statements, rather than objectively viewing their level of parental involvement across the entire caseload of clients whom are funded by the NDIS. This same bias may have influenced participants to under-report barriers to increased parental involvement centred around themselves as SLP relative to their reporting of parent-related barriers.

Recall bias may have also compromised the quality of responses, as participants may have erroneously provided responses relating to specific clients due to the survey instrument asking to recall clients previously seen. As this study was conducted during the COVID-19 pandemic of 2020, participants were asked to provide details on practices regarding parental involvement participants utilised within typical service delivery (i.e., not within any service delivery modifications conducted in response to the pandemic such as moving intervention sessions to tele-practice). This was done in order to ensure that study findings were valid to typical service delivery practices. As a result, participants were asked to recall their practices for clients and service delivery environments that may have been conducted up to 8 months prior to taking the survey. Participants may have also not been fully aware of which clients had intervention funded by the NDIS or may have had difficulty differentiating between these clients and clients accessing intervention through other funding sources when taking the survey, and thus some responses may have not been exclusively relating to NDIS-funded clients.

Precautions of distributing the survey to relevant networks, organisations, and Facebook groups were taken to mitigate the potential for individuals outside of the target demographic to participate the survey. However, the study’s anonymity did not make it possible to verify that participants were certified SLPs, although participants did self-report to be SLPs. This meant that any individual who was able to attain the survey link through avenues such as public Facebook groups was able to complete the survey.

Conclusion

This study set out to explore Speech-Language Pathologists' practices of parental involvement in paediatric speech and language intervention funded by the NDIS. Several relevant and informative findings were identified:

- The majority of participants agreed or strongly agreed with statements related to use of several practices within service delivery for NDIS-funded speech and language intervention for paediatric clients
- Practices relating to statements regarding encouraging parental attendance, involving parents within goal-setting, allowing time for discussion of session plans within consultations, and providing information regarding consultations to parents not present occur significantly less in school-based SLPs than SLPs in non-DECD work settings
- A range of specific family-friendly service delivery practices relating to parental attendance and involvement, setting and following up of home activities, encouraging goal setting discussions, and communicating and corresponding with parents were reported to be utilised within NDIS-funded paediatric speech and language intervention
- Parent-related barriers to further parental involvement were primarily identified, alongside SLP-related and workplace-related barriers in a small number of responses
- Facilitators to parental involvement largely centered around communication and rapport building with parents, utilising a family-friendly service delivery framework, and parent characteristics

With the NDIS being fully rolled out and its respective framework presenting as a core foundation of paediatric SLP service delivery, it is important to be aware of how this framework influences the use of practices that facilitate parental involvement. More research is therefore needed to further understand how the NDIS and other similarly marketised disability funding structures influence SLPs' implementation of family-friendly service delivery models in comparison to traditional government block funding programs for disability. It is hoped that this research will illustrate how the work and service delivery structures implemented by SLPs who provide NDIS-funded speech and language intervention to children are shaped by the NDIS framework. This illustration will then lead to a potential to provide a deeper context and awareness to underpin future potential adaptions to this population's service delivery in the hopes that use of family-friendly service delivery models maintain a staple approach.

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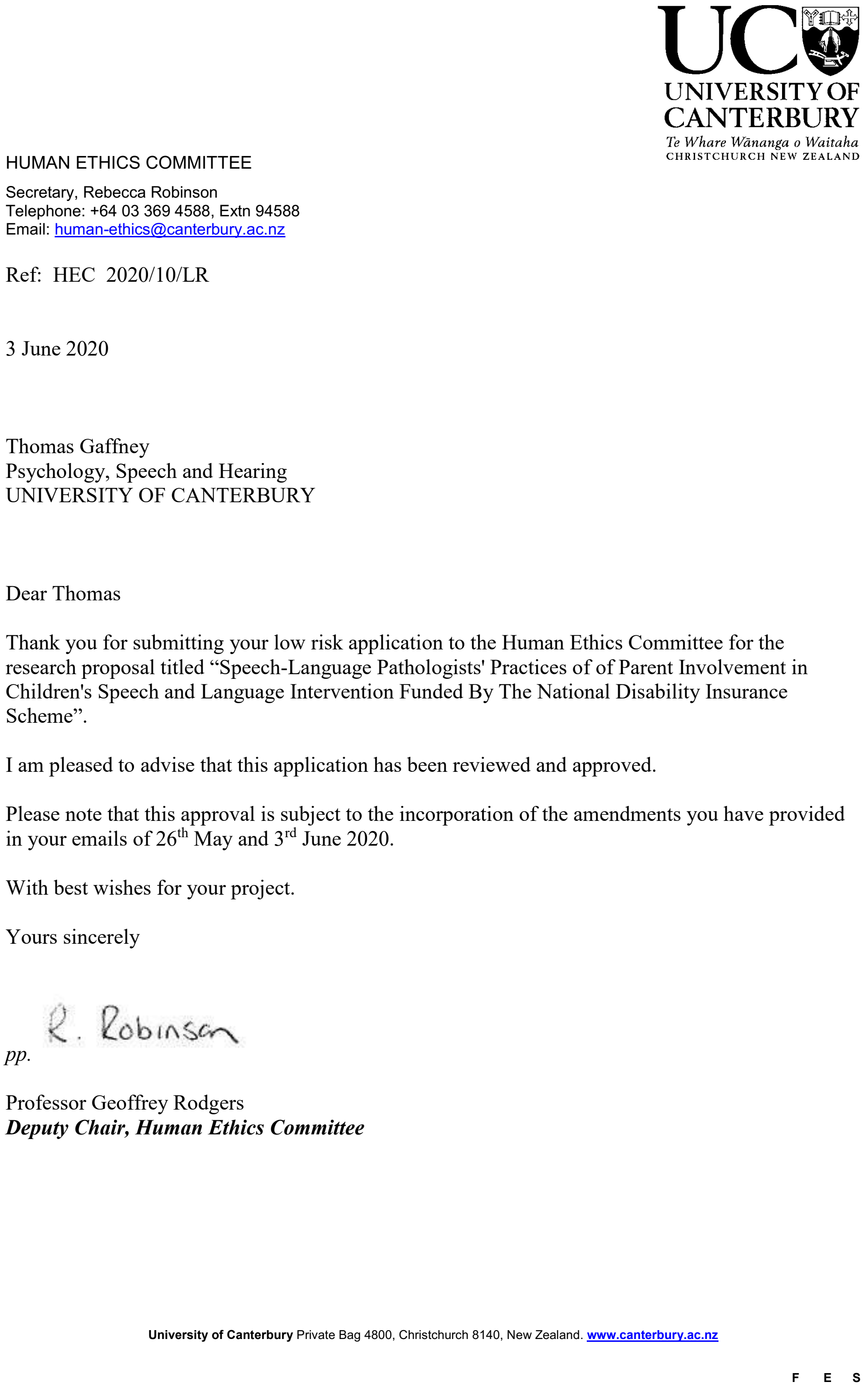
Appendix

Appendix 1

Human Ethics Committee Approval Letter 1



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 2020/10/LR

3 June 2020

Thomas Gaffney
Psychology, Speech and Hearing
UNIVERSITY OF CANTERBURY

Dear Thomas

Thank you for submitting your low risk application to the Human Ethics Committee for the research proposal titled “Speech-Language Pathologists' Practices of of Parent Involvement in Children's Speech and Language Intervention Funded By The National Disability Insurance Scheme”.

I am pleased to advise that this application has been reviewed and approved.

Please note that this approval is subject to the incorporation of the amendments you have provided in your emails of 26th May and 3rd June 2020.

With best wishes for your project.

Yours sincerely

R. Robinson
pp.

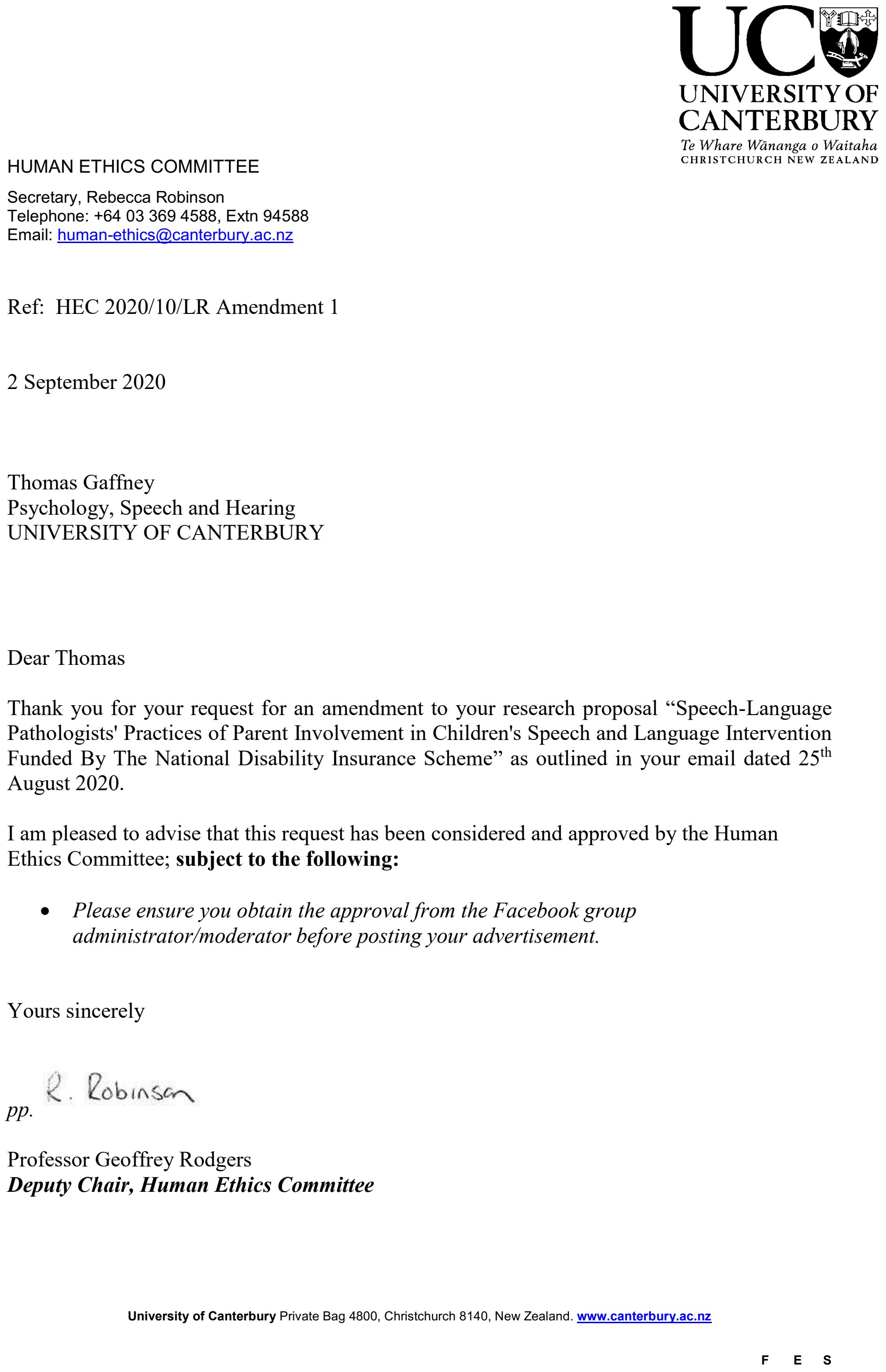
Professor Geoffrey Rodgers
Deputy Chair, Human Ethics Committee

University of Canterbury Private Bag 4800, Christchurch 8140, New Zealand. www.canterbury.ac.nz

F E S

Appendix 2

Human Ethics Committee Approval Letter 2 (Amendment)



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 2020/10/LR Amendment 1

2 September 2020

Thomas Gaffney
Psychology, Speech and Hearing
UNIVERSITY OF CANTERBURY

Dear Thomas

Thank you for your request for an amendment to your research proposal "Speech-Language Pathologists' Practices of Parent Involvement in Children's Speech and Language Intervention Funded By The National Disability Insurance Scheme" as outlined in your email dated 25th August 2020.

I am pleased to advise that this request has been considered and approved by the Human Ethics Committee; **subject to the following:**

- *Please ensure you obtain the approval from the Facebook group administrator/moderator before posting your advertisement.*

Yours sincerely

pp. R. Robinson

Professor Geoffrey Rodgers
Deputy Chair, Human Ethics Committee

University of Canterbury Private Bag 4800, Christchurch 8140, New Zealand. www.canterbury.ac.nz

F E S

Appendix 3

Survey Instrument

Survey Information

Thank you for opening this survey.

Details on this study:

The rollout of the National Disability Insurance Scheme (NDIS) across Australia has allowed children with speech and/or language disorders to gain increased access to funding, and therefore increased access to Speech-Language Pathology (SLP) intervention. This rollout of the NDIS has also had a marked influence on the service delivery model underpinning the work of paediatric SLPs due to the transition from a government-controlled funding model to an individualised, cash-for-care funding model of which the NDIS falls under. Literature has shown that the NDIS has influenced the service delivery of SLPs who work with children funded by the scheme.

Parental involvement in speech and language intervention has been shown in the literature to be an aspect of service delivery that can increase effectiveness of the intervention given, and can be argued to be a component of best practice. **This study seeks to explore how SLPs who work with clients funded through the NDIS involve parents in speech and language intervention.**

This study is being conducted by Thomas Gaffney, a Master of Science (Speech and Language Sciences) student at the University of Canterbury in Christchurch, New Zealand. Thomas is an Australian SLP and member of Speech Pathology Australia. The study is supervised by Jayne

Newbury (Lecturer of Communication Disorders at the University of Canterbury) and Dean Sutherland (Senior Lecturer of Communication Disorders at the University of Canterbury).

Details on the survey:

The survey comprises 9 multiple-choice questions, 8 Likert-scale format questions (i.e., where participants are asked to indicate their level of agreeance for each statement on a 5-point-scale), and 12 varied questions for your most recently seen NDIS-funded client. The survey will explore demographic and caseload information, as well as questions regarding your practice of involving parents in speech and/or language intervention with children funded by the National Disability Insurance Scheme. Please note that questions pertaining to specific clients will be asked in general terms, and no confidential information relating to these clients will be asked to be provided.

The survey will take approximately 7-15 minutes to complete.

Consent:

Participation in this study is completely voluntary. If you agree to participate, you are not under any obligation to complete and submit the survey and you may discontinue the survey at any time without any adverse consequences. However, as this survey collects no identifiable data, you are not able to withdraw from this study once your survey has been submitted.

Findings arising from this study:

The research findings will provide data about current service delivery practices of how SLPs involve parents in speech and/or language intervention with clients funded through the NDIS. Findings may inform reflections on current service delivery, as well as possible future adaptations to service delivery.

You will be able to email the primary researcher conducting this study, Thomas Gaffney, from April 2021 for a summary of the research outcomes that arise from this study. Contact details are listed below.

Risks and privacy information:

All the data collected will be handled in accordance with the Privacy Act (1993) and will be kept strictly anonymous in a secure, anonymised database. Only the research team will have access to your completed survey. This study will be carried out in absolute compliance with all relevant legislation and guidance from the University of Canterbury Human Ethics Committee.

Random prize draw:

5x $50 gift cards are available to be won for participants who submit a survey. A brief entry form will be made available following submission where participants can enter into the random prize draw. If you choose to provide contact details to enter the prize draw, your contact details will be stored separately in a secure file that is not linked in any way to your survey responses.

Potential further research in this study:

The research team may wish to contact you in further research for this study. If you are willing to be contacted, please select this option on the page following submission of the survey. If we do contact you regarding further research, you will be provided with information regarding the study at the time of contact.

Enquiries, complaints, or concerns:

This study has been approved by the Human Ethics Committee at the University of Canterbury, Christchurch New Zealand (Ethics Approval Number HEC-2020/10/LR). If you have any enquiries, complaints, or concerns regarding the conduct of the project, you may contact the deputy chair of the Human Ethics Committee or the researcher of this study - contact details are below. Any contact will be treated in confidence, and you will be informed of any outcomes related to your contact.

Contact information:

Deputy Chair of the Human Ethics Committee:

Professor Geoffrey Rodgers

Phone: +6433694588 (note that this is a New Zealand phone number)

human-ethics@canterbury.ac.nz

Primary researcher of this study:

Thomas Gaffney

Phone: +64212508596 (note that this is a New Zealand phone number)

thomas.gaffney@pg.canterbury.ac.nz

To participate in this study, please **click on the red arrow below to begin the survey**. Please note that by submitting this survey, you have provided consent to participate in this study.

Demographic Information

Question 1: For how long have you been a practising Speech-Language Pathologist?

○ Less than 1 year (1)

○ 1 year (2)

○ 2 years (3)

○ 3 years (4)

○ 4 years (5)

○ 5 years (7)

○ 6 years (8)

○ 7 years (9)

○ 8 years (10)

○ 9 years (11)

○ 10 or more years (12)

○ Unsure (13)

Question 2: For how long have you provided intervention for clients with speech and/or language disorders as a Speech-Language Pathologist?

○ Less than 1 year (1)

○ 1 year (2)

○ 2 years (3)

○ 3 years (4)

○ 4 years (5)

○ 5 years (7)

○ 6 years (8)

○ 7 years (9)

○ 8 years (10)

○ 9 years (11)

○ 10 or more years (12)

○ Unsure (13)

Question 3: Which city/town do you work in at the moment?

○ Sydney (1)

○ Melbourne (2)

○ Brisbane (3)

○ Perth (4)

○ Adelaide (5)

○ Other (please state) (6) ____________________

Question 4: Which of the following describes your work setting? (select all that apply)

☐ Department of Education and Child Development (1)

☐ Community health (2)

☐ Hospital (3)

☐ Private practice (4)

☐ Disability (5)

☐ University (6)

☐ Other (please state) (7) ____________________

Question 5: What percentage of children (i.e., clients aged 0 to 17 years) on your caseload today are funded by the NDIS? (approximately)

○ 0-9% (1)

○ 10-19% (2)

○ 20-29% (3)

○ 30-39% (4)

○ 40-49% (5)

○ 50-59% (6)

○ 60-69% (7)

○ 70-79% (8)

○ 80-89% (9)

○ 90-100% (10)

○ Unsure (11)

Question 6: What percentage of children on your caseload today come from culturally and linguistically diverse backgrounds? (approximately)

○ 0-9% (1)

○ 10-19% (2)

○ 20-29% (3)

○ 30-39% (4)

○ 40-49% (5)

○ 50-59% (6)

○ 60-69% (7)

○ 70-79% (8)

○ 80-89% (9)

○ 90-100% (10)

○ Unsure (11)

Question 7: For how long have you worked with children funded by the NDIS? (approximately)

- ○ Less than 1 year (1)
- ○ 1 year (2)
- ○ 2 years (3)
- ○ 3 years (4)
- ○ 4 years (5)
- ○ 5 years (7)
- ○ 6 years (8)
- ○ 7 or more years (13)
- ○ Unsure (14)

Question 8: How many hours do you work as a Speech-Language Pathologist per week? (on average)

- ○ 0-8 hours (1)
- ○ 9-20 hours (2)
- ○ 21-37 hours (3)
- ○ 38 or more hours (i.e., full-time hours or more) (4)
- ○ Unsure (5)

Question 9: How many working hours do you spend in client consultations per week? (on average)

- ○ 0-8 hours (1)
- ○ 9-20 hours (2)
- ○ 21-37 hours (3)
- ○ 38 or more hours (4)
- ○ Unsure (5)

Question 10: The following questions are only asked in relation to **all** children **on your caseload who you have conducted speech and/or language intervention for that has been funded by the NDIS**. Please keep this in mind while you answer these questions. COVID-19 note: As a result of the recent coronavirus, settings of intervention sessions may have been altered (e.g., conducting sessions through tele-practice such as Zoom). **Please only answer these**

questions in relation to the context in which you typically conduct intervention (such as in-person in a clinic).

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)	Not applicable (6)
I encourage parents/caregivers to be present during my intervention sessions (1)	○	○	○	○	○	○
I encourage parents/caregivers to be involved in the work and activities conducted in my intervention sessions (2)	○	○	○	○	○	○
I typically set home activities for parents/caregivers to complete with their children between intervention sessions (3)	○	○	○	○	○	○

I typically follow up on home activities to assess the progress their child has made on these activities outside of intervention sessions (4)	○	○	○	○	○	○
I involve parents/caregivers in goal-setting discussions for their child's intervention (5)	○	○	○	○	○	○
I provide information to parents/caregivers so they are made aware on what has been happening in intervention sessions in which they are not present (6)	○	○	○	○	○	○

I allow parents/caregivers the choice to engage in correspondence (e.g., through email or phone) outside of intervention sessions so they are able to ask questions and provide information relating to their child’s intervention (7)	○	○	○	○	○	○
If the parent/caregiver attends the session, I allow some time to discuss details relating to the intervention (e.g., the plan of the day’s intervention, intervention progress, feedback from parents relating to intervention) (8)	○	○	○	○	○	○

Part 3 of 3: NDIS-funded Client

Information: Please complete the details in the following questions for **the child (whose intervention is funded by the NDIS) you have most recently seen in clinic that you provide/have provided speech and/or language intervention for**.

COVID-19 note: As a result of the recent coronavirus, settings of intervention sessions may have been altered (e.g., conducting sessions through tele-practice such as Zoom). **When answering these questions, please only consider intervention sessions that have been conducted in face-to-face/clinic settings.**

Question 1: What was the gender of the child?

- ○ Male (1)
- ○ Female (2)
- ○ Other/gender non-binary (3)

Question 2: What was the age of the child at the start of their intervention with you?

○ Less than 1 year (1)

○ 1 year (2)

○ 2 years (3)

○ 3 years (4)

○ 4 years (5)

○ 5 years (21)

○ 6 years (22)

○ 7 years (23)

○ 8 years (24)

○ 9 years (25)

○ 10 years (26)

○ 11 years (27)

○ 12 years (28)

○ 13 years (29)

○ 14 years (30)

○ 15 years (31)

○ 16 years (32)

○ 17 years (34)

○ Unsure (35)

Question 3: What was the child's communication disorder? (select all that apply)

- ☐ Developmental Language Disorder (1)
- ☐ Speech Sound Disorder (2)
- ☐ Intellectual Disability (3)
- ☐ Autism Spectrum Disorder (4)
- ☐ Cleft Palate (5)
- ☐ Stuttering (6)
- ☐ Selective Mutism (7)
- ☐ Global Delay (8)
- ☐ Other (please state) (9) ____
- ☐ Unsure (10)

Question 4: Have you provided intervention for speech sound disorders for this child? If so, please select the interventions you have provided (select all that apply)

- ☐ Auditory discrimination (focusing on the skill of recognising similarities and differences between sounds) (1)
- ☐ Minimal opposition contrast (i.e., minimal pairs) (2)
- ☐ Maximal oppositions contrast (using pairs of words containing a contrastive sound that is maximally distinct) (11)
- ☐ Cued articulation (using cues to teach individual sounds in a word) (3)
- ☐ Phonological awareness (4)
- ☐ Traditional articulation therapy (i.e., the Van Riper approach) (5)
- ☐ Auditory bombardment (i.e., focused auditory stimulation - words with a specific target sound are presented to the client) (9)
- ☐ Core vocabulary (focusing on consistent production of words in the client's current vocabulary) (10)
- ☐ Other (please state) (6) ____
- ☐ Unsure (7)
- ☐ I have not provided intervention for speech sound disorders for this child. (8)

Question 5: Have you provided intervention for language disorders for this child? If so, please select the categories you have provided intervention for (select all that apply)

- ☐ Syntax and morphology (e.g., word structure, sentence structure) (1)
- ☐ Semantics and vocabulary (e.g., word meanings and synonyms/antonyms, modelling words) (2)
- ☐ Phonological awareness (3)
- ☐ Metalinguistics (e.g., word semantics across different contexts, figurative and abstract language) (9)
- ☐ Narrative and other forms of discourse (e.g., story construction) (5)
- ☐ Reading comprehension (12)
- ☐ Other (please state) (6) ____
- ☐ Unsure (7)
- ☐ I have not provided intervention for language disorders for this child. (8)

Question 6: For how long was/has this child been on your caseload? (approximately)

○ Less than 1 month (1)

○ 1-2 months (15)

○ 3-6 months (16)

○ 7-12 months (17)

○ Over 12 months (18)

○ Unsure (19)

Question 7: Please describe the ways in which you encouraged the attendance and involvement of the parent/caregiver in your intervention sessions with their child (if any)

____

____

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____

Question 8: Please describe the ways in which you set and followed up on home activities for the parent/caregiver to work on between your intervention sessions with their child (if any)

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Question 9: Please describe the ways in which you have allowed the parent/caregiver to discuss their opinions relating to the goals of intervention for their child (if any)

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Question 10: Please describe how you have maintained correspondence with the parent/caregiver of this child in order to provide information and allow for parent/caregiver feedback on information, questions, and feedback (if at all)

____

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Question 11: What barriers do you feel may have influenced yourself from involving parents more in intervention with this child (if any)?

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Question 12: What has helped you to involve parents more in intervention with this child (if any)?

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Submission

Thank you for completing this survey. Please click on the forward red arrow below to submit your survey. Please note that after submitting this survey, you will not be able to alter your answers to the survey questions.

The link to enter into the random prize draw and indicate consent to being contacted for potential further research for this study will be on the next page (following submission).

Consent to being contacted for this further research is optional, and you will still be able to enter into the prize draw if you do not wish to be contacted for further research.

Appendix 4

Prize Draw Survey

Thank you for your survey submission.

The following details taken will **only** be used to contact winners of the random prize draw, as well as to contact those who are willing and have provided consent to be involved in future research. Please note that your contact details used to enter the prize draw and be contacted for further research will be stored separately in a secure file that is not linked in any way to your survey responses.

Each of the 5 winners will receive 1x $50 e-gift voucher which can be redeemed at many Australian retail stores such as Woolworths, Coles, IKEA, and JB Hi-Fi. Winners will be contacted through e-mail in November 2020.

Please note that participants not willing to be contacted for further research in this study are equally eligible to win in the random prize draw.

Question 1: Full name:

____

Question 2: Email address:

____

Question 3: There may also be further research conducted in this study. If you are willing to be contacted for further research, please indicate this below.

○ I am willing to be contacted for further research in this study. (1)

○ I am not willing to be contacted for further research in this study. (2)

Question 4: A summary of the findings from this study will be available from April 2021. Please click on the statement below if you would like to receive a summary of the findings - note that this is optional. Please also note that this is only applicable if you have chosen to provide an email address in response to Question 2 above.

☐ I would like to receive a summary of the findings from this study (1)