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# Exploration of parental perspectives and involvement in therapeutic communication approaches for deaf and/or hard-of-hearing children at special schools in South Africa

Aisha Casoojee, Katijah Khoza-Shangase, Amisha Kanji

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Audiology, University of the Witwatersrand Johannesburg Faculty of Humanities, Johannesburg, Gauteng, South Africa

**Correspondence to**

Aisha Casoojee;  
[aisha.casoojee@wits.ac.za](mailto:aisha.casoojee@wits.ac.za)

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**ABSTRACT**

Family-centred intervention optimises the development of communication abilities and academic outcomes in children with hearing loss. Cognisance of family values, respect for family differences and adaptations to cultural and linguistic diversity ensure the collaboration of parent-professional relationships. This study investigated the parental involvement and parental perceptions regarding the communication intervention approaches implemented (i.e., traditional speech-language therapy and listening and spoken language-South Africa—adapted Auditory Verbal Therapy) for children with profound hearing loss. The study was conducted at special schools for children with hearing loss across four provinces in South Africa, where grade-level core skills are taught using a mainstream curriculum complemented by specialised instruction. Data were collected through a parental self-administered survey and a retrospective record review. An inductive analysis of transcripts was conducted, and the Fisher's exact test assessed associations between data sets. Findings demonstrated limited informational counselling provided to parents regarding communication intervention options. Following the initiation of the communication intervention process, findings indicate parental buy-in, fuelled by their aspirations for their child with a hearing loss. Although results suggest that parents prefer a listening and spoken language therapeutic communication modality, this approach is hindered by the lack of culturally sensitive and linguistically appropriate care. This is an important finding, particularly in multilingual and multicultural contexts like South Africa. These context-specific outcomes emphasise that communication interventionists must be cognizant of parental-informed decision-making, cultural contexts and linguistic sensitivity for effective parent-professional collaborations.

**BACKGROUND**

A congenital hearing loss present at birth or early onset permanent bilateral hearing loss are common defects in neonates and infants. Hearing loss prevents children from receiving adequate access to auditory stimulation, impacting the development of language, cognitive abilities and psychosocial skills (Health Professions Council of South Africa 2018; Black *et al* 2017). The linguistic competence and literacy development for deaf and/or hard-of-hearing (DHH) infants and young children can be maximised by Early Hearing Detection

and Intervention (EHDI), that is, newborn hearing screening by 1 month old, diagnosis of hearing loss by 3 months old and the implementation of intervention services by 6 months old (1-3-6 benchmark) (Joint Committee on Infant Hearing 2019a). In South Africa, a low- and middle-income country (LMIC), the Health Professions Council of South Africa (HPCSA) has adjusted the EHDI benchmarks to 1-4-8 based on contextual factors (Casoojee *et al* 2024; Health Professions Council of South Africa 2018). Despite this, there is no established uniform system for newborn hearing screening in the public healthcare sector of South Africa. Hearing screening is currently conducted on a risk basis, which also lacks systematic implementation (Bezuidenhout *et al* 2018).

South Africa grapples with continuous challenges, including social inequality, poverty, unemployment, a high burden of disease, inequitable healthcare service provision and a substantial human resources crisis facing the health sector, a legacy of apartheid which fostered racial segregation (de Villiers 2021; Coovadia *et al* 2009). Despite these formidable pressures, South Africa has affirmed its commitment to upholding children's rights by ratifying policies that endorse unrestricted access to healthcare services and education alongside other fundamental human rights (de Villiers 2021; Balton *et al* 2020). Nevertheless, individuals with disabilities in South Africa face disparities in accessing healthcare, exacerbated by the paucity of disability-specific services, such as aural rehabilitation for hearing loss (Kuper and Haness-Hancock 2020). This situation underscores the ongoing challenges and contradictions within the country's efforts to ensure equitable rights and opportunities for all its citizens, particularly DHH infants and young children.

The prevalence of hearing loss in South Africa is estimated at 17 babies born daily with permanent sensorineural hearing loss (Casoojee *et al* 2021). Given that 22% of the registered speech-language therapists (SLTs) and audiologists work in public healthcare in South Africa, the critical shortage of skilled healthcare professionals in relation to the high prevalence of hearing loss is evident (Casoojee 2024; Pillay *et al* 2020). Deliberations around family-centred intervention (FCI) are thus crucial to the success of EHDI programmes in LMICs. FCI is an approach that emphasises the active involvement of families in the planning, delivery and evaluation



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of healthcare services, prioritising the family's needs, values and goals to optimise child development outcomes (Moeller *et al* 2013; Holzinger *et al* 2022). Parents of children with hearing loss are the primary individuals involved in the child's daily life, providing a significant cultural and emotional influence on their development compared with SLTs and audiologists, who have a more limited and intermittent engagement with the child (Maluleke *et al* 2021; Mantri-Langeveldt *et al* 2019). FCI can thus be defined as a family-professional partnership, prioritising the child's developmental outcomes within the context of their family (Holzinger *et al* 2022).

To facilitate effective intervention, professionals must strive to collaborate with the parents of infants and young DHH children in the process of gaining the necessary knowledge, information, clarity and experiences that support fully informed decisions (Scarinci *et al* 2018; Moeller *et al* 2013; Joint Committee on Infant Hearing 2019b; Holzinger *et al* 2022; Maluleke and Khoza-Shangase 2023). Elements influencing parental decisions include the DHH child's unique strengths and abilities, the family's values and belief system, social circumstances, cultural influences and personal comfort level in making choices on behalf of the child (Holzinger *et al* 2022). Volterra and Gullberg (2008) suggest that language acquisition, signed or spoken, depends on the hearing family members' responsiveness to their hearing-impaired child's communication needs. Blöse and Joseph (2017) found that, given the early auditory and language deprivation, intervention sessions consisting of 1 or 2 hours per week were inadequate to compensate and account for the improved language scores. Thus, empowering parents to become the primary facilitators of their child's speech and language development is a critical therapy component for DHH children learning language (Stacy Crouse 2020; Khoza-Shangase 2022).

Within the first few months after diagnosis, parents often face the heavy burden of deciding on medical and communication options for their DHH children, such as cochlear implants or sign language (DesGeorges 2016). An ongoing debate over communication choices for DHH children persists across political, moral, educational and clinical contexts (DesGeorges 2016; Kanji and Casoojee 2021). The quality and quantity of information required for families to navigate this complex process are derived from various sources while considering the cultural, educational and social implications of their decisions (Ching *et al* 2018; Davids *et al* 2021; DesGeorges 2016). The decision regarding which communication approach to use should be a dynamic, ongoing family-centred exploration with the early interventionist, focusing on the ease and frequent language exchange between the family and DHH child (Gravel and O'Gara 2003; Casoojee *et al* 2021; Prelock 2021). The communication journey of a DHH child and their family is a complex, interwoven process in which the child's use of language or method of communication may change numerous times (Blöse and Joseph 2017; Scarinci *et al* 2018). Families may adjust their DHH child's communication method at various stages, influenced by the family's characteristics, strengths, beliefs, access to information and the availability of family-centred services. This necessitates that early interventionists provide ongoing support to families throughout the entirety of the DHH child's communication journey rather than limiting their advice on a communication approach to the initial decision-making phase following a hearing loss diagnosis.

Two intervention practices are implemented in South Africa for DHH children and their families. The (1) traditional speech-language therapy (TSLT) approach includes various communication methods, ranging from visual-gestural approaches like

sign language, total communication (i.e., a range of communication methods, such as sign language, speech and listening, lip reading, fingerspelling, facial expressions and gestures, used in combinations tailored to each DHH child's needs) or cued speech (Casoojee *et al* 2021; Kanji and Casoojee 2021). There is a dyadic therapy interaction during TSLT, that is, also called a remedial sequence where the first part, the therapist requests, in the second part, the client responds and in the third part, the therapist evaluates the client's response with a scaffolding role in the interaction. The (2) listening and spoken language-South Africa (LSL-SA) approach is based on auditory verbal therapy principles. The multiparty interaction during a listening and spoken language (LSL) session allows for a versatile interaction structure, providing conversational teamwork and alliances between the LSL interventionist and the parent (Ronkainen *et al* 2014). The LSL interventionist simultaneously supports the child's spoken language learning while coaching the parent (Ronkainen *et al* 2014). Active parental participation is at the core of an LSL approach (Estabrooks *et al* 2020).

Parental involvement is typically defined as a parent's ability to follow through with intervention recommendations, including attending appointments, having confidence in working with their child and engaging in communication intervention (Cejas *et al* 2021), as facilitated by programmes such as Hi-Hopes within the South African context. Parental involvement in communication interventions is not just effective but is considered as best practice in early language intervention for DHH children (Roberts 2019; Roberts and Kaiser 2011; Stephan and Manning 2017). Parents' communication skills are a significant predictor of positive language and academic development for these children (Calderon 2000). Recent studies continue to highlight the importance of these skills, showing that parents' ability to engage in responsive, supportive communication is linked to better language outcomes and academic achievement for DHH children (Miller *et al* 2024). Moreover, effective communication supports vocabulary development and fosters social-emotional skills, which are essential for academic success (Sultana and Purdy 2024). This underscores the importance of parents being taught to implement specific language support strategies (Roberts and Kaiser 2011). However, it is also important to note that hearing parents with insufficient sign language proficiency may inadvertently cause delayed language acquisition in DHH children (Hall 2017). Recent evidence challenges earlier assumptions that hearing parents must achieve fluency in sign language to support the language growth of their DHH children. Studies suggest that even limited proficiency in sign language can contribute positively to a child's language development, provided that interactions are consistent and meaningful. For instance, Delcenserie *et al* (2024) emphasise that exposure to naturalistic signed communication, regardless of parental fluency, supports language acquisition and cognitive development in DHH children. Similarly, Caselli *et al* (2021) highlight that parental engagement, rather than fluency, is the critical factor for fostering linguistic growth, as it encourages frequent and rich communication exchanges. Pontecorvo *et al* (2023) further argue that focusing on collaborative and interactive communication strategies can mitigate risks of language delay or deprivation, even when parents are not fully fluent in sign language. These findings highlight the importance of emphasising parental involvement and accessible support structures over linguistic perfection in early intervention programmes.

With >90% of DHH children born into hearing families (National Institute on Deafness and Other Communication Disorders 2021), these parents would need support to find a

community of peers and role models who use both sign and spoken/written language (Lillo-Martin and Henner 2021). Despite the equal potentiality of acquiring sign language and spoken language, deaf children born to hearing parents do not have this equal potentiality to acquire sign language when their parents do not sign (Lillo-Martin and Henner 2021). Blose and Joseph (2017) found that communication for deaf children using South African Sign Language (SASL) within the South African home is problematic as communication partners are not fluent in SASL. This mismatch in the communication mode in the home context resulted in fewer communication interactions and impoverished SASL with frequent breakdowns, amid the predominance of oral language (Blose and Joseph 2017).

Early interventionists are tasked with providing informational counselling to parents. However, when this information lacks clarity or is delivered in a biased or incomplete manner, it compromises parents' ability to make fully informed choices (Kecman 2019; Moeller *et al* 2013; Porter *et al* 2018; Young *et al* 2005b). Furthermore, early interventionists are to ensure that parents acquire the necessary skills to implement the language support strategies and feel confident applying them in their daily lives (Stephan and Manning 2017). Interventions should thus be focused on helping parents gain the knowledge and skills they need to use to help their DHH child (Dempsey and Dunst 2004). In TSLT, the DHH child is the client, and the provider is hands-on with the DHH child (ie, provider-implemented) (DeVeney *et al* 2017; Ganek and Cardy 2021; Roberts 2019). On the contrary, the LSL approach coaches parents to provide the services required by the DHH child rather than simplistically teaching and focusing only on the child, to the detriment of the family and social milieu (Stacy Crouse 2020). Keeping the parents of a DHH child firmly at the centre of the child's therapy programme is intrinsic to an LSL approach (ie, parent-implemented) (White and Brennan-Jones 2014).

Socio-familial/cultural background, family communicative patterns and parental hearing sensitivity influence the development of the DHH child's communication abilities and academic outcomes (Sevinc and Senkal 2021; Bush *et al* 2014). The successful outcomes of early intervention programmes depend on more than just the communication approach or technology due to the central role of hearing in a child's development (Butler 2012). Studies have demonstrated that family support as a component of EHDI forms the backbone of the intervention process, providing numerous strengths and opportunities which have a positive impact on speech and language development (Sealy *et al* 2023; Dall *et al* 2022; Akçakaya and Tavşancıl 2016; Lew *et al* 2014; Nelson *et al* 2011). Interventions should thus be implemented in a culturally competent manner, as it would enable the collaboration of a family-professional relationship that is cognisant of family values, goals and aspirations (Naidoo and Khan 2022; Moeller *et al* 2013). Cultural competence refers to the ability of healthcare professionals to provide care to patients with diverse values, beliefs and behaviours, tailoring care to meet patients' social, cultural and linguistic needs (Betancourt *et al* 2002).

South Africa's multicultural and multilingual landscape reflects a global phenomenon where cultural competence is essential in therapeutic interventions. The South African context is uniquely characterised by the incongruence between the racial and linguistic profile of early interventionists and those of the majority of the population. Early interventionists within the South African context need to be cognisant that intervention sessions must incorporate culturally sensitive and responsive practices in their therapeutic modalities (Pinto *et al* 2024;

Estabrooks *et al* 2020; Paul and Roth 2011; Pascoe and Norman 2011). The LSL intervention approach and its therapy resources developed by clinicians and researchers in high-income countries are being implemented in South Africa due to the absence of our own contextually relevant resources (Pascoe and Norman 2011). Contextually relevant resources refer to assessment tools, intervention programmes, guidelines and norms developed for use within a specific population and setting (Pascoe and Norman 2011). It is well-established that culturally responsive intervention approaches are more readily embraced (Pascoe and Norman 2011).

Among the most challenging issues interventionists face is linguistic diversity (Estabrooks *et al* 2020; Maluleke *et al* 2022). South Africa's multilingual milieu presents a particularly arduous but surmountable obstacle. Vocabulary, stereotypical concepts, high-frequency words, body language and gestures differ between cultures and languages (Pascoe and Norman 2011). Studies confirm that intervention strategies used in one language may not be applicable when used with another (Greenwood *et al* 2010; Gxilishe 2004). Khoza-Shangase and Mophosho (2021) provide sufficient evidence supporting positive outcomes linked to health interventions that take careful cognisance of patients' language and culture.

Effective FCI transcends therapeutic communication strategies for DHH children (Roberts 2019). It recognises that language development is intrinsically connected to other abilities that are essential for social inclusion and active participation in everyday life (Samuelsson *et al* 2024). Coaching parents in the systematic instruction and implementation of communication strategies is critical to modifying the parent and the DHH child's behaviour (Roberts 2019). The parental coaching and empowerment process within the paediatric rehabilitation milieu reflects a paradigm shift from therapist-as-expert to one of supporting goal achievement and capacity building, exemplifying family-centred practice principles, suggesting positive, long-term outcomes (King *et al* 2024).

FCI frames this study in three ways. First, as far as the *rationale for FCI as the framework* is concerned, the study adopts FCI as a theoretical framework to explore parental involvement, perceptions and decision-making in therapeutic communication interventions for DHH children. This framework aligns with the premise that effective intervention is most achievable when professionals collaborate with families, recognising them as central to the child's developmental progress (Maluleke *et al* 2021; Moeller *et al* 2013). Second, regarding *integration into the methodology*, the FCI framework in this study guided the development of the survey instrument by ensuring that the questions addressed key FCI components, such as parental engagement in therapy sessions, their confidence in implementing strategies and their perceptions of cultural and linguistic appropriateness. Lastly, insofar as *guiding the interpretation of results*, the FCI framework informed the interpretation of findings, highlighting how parental empowerment and culturally sensitive practices influence family-professional collaboration and, subsequently, child outcomes.

## MATERIALS AND METHODS

### Ethical approval

Prior to the study being conducted, ethical approval was obtained from the University of the Witwatersrand Ethics Committee (HREC) (protocol number: H20/06/03). Thereafter, all procedures and protocols also adhered to the Helsinki Declaration of 1975, as revised in 2013 (World Medical Association 2013).

**Table 1** Demographic data of participants included in the study (n=23)

Characteristic	Category	N	%
		23	
Age (years) (n=20)	Mean (SD); range	42 (6); 33-54	
Ethnicity	White	10	43
	Black	5	22
	Coloured	5	22
	Indian	3	13
Gender	Male	1	4
	Female	22	96
Relationship to child	Mother	22	96
	Father	1	4
Marital status	Married	16	70
	Single	3	13
	Divorced	3	13
	Separated	1	4
Highest level of education	Grade 11 (standard 9) or lower	1	4
	Grade 12 (matric)	10	43
	Postmatric diploma	5	22
	Baccalaureate degree(s)	5	22
	Postgraduate degree(s)	2	9
Employment status	Employed	15	65
	Self-employed	4	17
	Unemployed	4	17
Socioeconomic profile of the residential area	Low	9	39
	Low-middle	5	22
	Middle	5	22
	Middle-upper	3	13
	Upper	1	4

## Aim

The main aim of this study was to explore the parental perspectives and parental involvement in the communication intervention process of learners with hearing loss who received LSL-SA (LSL-SA group) versus TSLT (TSLT group), with the specific objectives being: (1) to explore the parental involvement in the communication therapy of children with hearing loss, (2) to determine the communication skills of DHH children on discharge from therapy and their academic outcomes at the end of the foundation phase at school in order to assess parental confidence in applying communication therapy techniques at home, (3) to establish parental perceptions about the cultural and linguistic appropriateness of communication therapy techniques implemented and materials used in therapy, (4) to determine perceived facilitators and barriers regarding the communication therapy approach and (5) to identify whether the parents would have preferred a different therapeutic communication approach to be implemented in therapy.

## Study design

A descriptive survey design was adopted. Although this study forms part of a larger study titled '*Speech-Language Acquisition and Scholastic Outcomes of Children with Hearing Impairment following Early Intervention in South Africa: A Comparative Study*', the objectives and reported findings discussed here are exclusive to this paper. This study employed a descriptive survey design to explore parental involvement and perceptions regarding communication intervention approaches for DHH children. The design incorporated both quantitative

and qualitative methods to capture a comprehensive understanding of parental experiences. Data were collected through a self-administered parental survey and a retrospective review of therapy records. This mixed-methods approach allowed for triangulation of data, enhancing the credibility and depth of the findings. The survey included closed-ended and open-ended questions to examine various aspects of therapy involvement, while the retrospective review provided additional context and validation of the reported information.

## Study sample and demographics

The parents of 127 children with profound hearing loss, selected through a purposive sampling technique, were invited to participate in the survey, to which 23 parents agreed. To gain access to the participants, the researchers obtained written permission from special schools for children with hearing loss in (1) Johannesburg, Gauteng; (2) Pretoria, Gauteng; (3) Morningside, KwaZulu Natal; (4) Cape Town, Western Cape and (5) Port Elizabeth Central, Gqeberha. Once access was granted to the special school, the researcher compiled a list of potential participants based on recommendations from school management. This included parents of DHH children who completed grade 3 in the foundation phase of primary schooling between 2008 and 2020. Researchers sought permission from school management to identify potential participants. After obtaining institutional approval, the schools facilitated initial contact by distributing the study information and consent forms to eligible parents. The researchers did not access parents' contact details directly, ensuring compliance with the Protection of Personal Information Act. Interested parents contacted the researchers directly to express their willingness to participate and signed informed consent forms prior to data collection. The parents signed an informed consent form after indicating their willingness to complete a survey and allow the researcher to access their children's therapy files and grade 3 academic reports. This approach safeguarded participants' privacy and adhered to ethical guidelines for handling personal information.

All the special schools identified in this study equally offer DHH children and their families a structured FCI programme, therapeutic services that include speech-language therapy,

**Table 2** Therapy approach and parental involvement (n=23)

Duration of EI (years) (n=23)	Mean (SD); range	6.1 (3.0); 0.9–14.4	
		N	%
Type of therapy approach	Listening and spoken language-South Africa	16	70
	Traditional speech-language therapy	7	30
How was the therapy approach chosen	Chosen independently by the interventionist	12	52
	Joint decision between the parent and the interventionist	8	35
	Chosen independently by the parent	3	13
Frequency of therapy received by the child	Daily	1	4
	Once a week	5	22
	More than once a week	2	9
	Once every alternate week	7	30
	Once a month	8	35
Frequency of therapy attended by the parent	Never	10	43
	Every session	10	43
	Every alternate session	1	4
	Once a month	2	9

audiology and social work, a structured preprimary grade and a foundation phase school environment. The teaching approaches at these schools follow an oral, language-enriched programme, incorporating natural gestures, designed to address the language delay needs of DHH children, with the goal of enabling them to continue their education in mainstream schools on completion of grade 3 in the foundation phase. The educational approach (i.e., a mainstream curriculum in which grade-appropriate core skills are taught and assessed within a small class setting, with therapeutic intervention) and the rehabilitation approach (i.e., communication interventions offered at school, with the same measures used across the special schools in this study to assess speech-language and academic outcomes) are congruent. These measures include the Preschool Language Scales-5, Clinical Evaluation of Language Fundamentals, Integrated Scales of Language Development, Functional Listening Index-Paediatric, and the Goldman Fristoe Test of Articulation. The included schools specialise in developing listening, speech, spoken language and communication skills for DHH children. Therefore, none of the schools follow an SASL approach, as they do not identify as schools for the deaf.

The adequacy of the sample size was determined using the formula:  $n = \frac{m}{1 + \frac{m-1}{N}}$ ,

where  $m = \frac{Z^2 P(1-P)}{d^2}$  ( $n$ =sample size,  $N$ =population size—127 children included in the main study,  $Z$ = $Z$ -statistic for the chosen level of confidence (95%),  $P$ =expected prevalence or proportion (50% worst case),  $d$ =precision of 5%). The sample size of 23 is adequate for the descriptive analysis (Daniel 2013).

### Inclusion and exclusion criteria

The parents of children (1) diagnosed with a congenital or early onset, bilateral, profound hearing loss, (2) enrolled in an intervention programme receiving either TSLT or the LSL-SA approach, (3) fitted with hearing aids or cochlear implants, (4) who have completed grade 3 in the foundation phase of primary schooling, were included in the study. The parents of DHH children who presented with additional cognitive impairment were excluded from the study. This exclusion was ascertained from the main study.

### Data collection

#### Data collection tool

Data collection was conducted using a questionnaire that was specifically developed for this study and pretested with one parent. The participant in the pilot study was not included in the main study. The questionnaire, available on request from researchers, comprised two sections: section A—parent demographics and section B—therapy information and EI outcomes.

#### Data analysis

Descriptive analysis of the study variables for objectives 1, 2, 3 and 5 was conducted using SAS V.9.4 for Windows (SAS Institute Inc 2010). Fisher's exact test assessed associations between selected study variables for objectives 1 and 3. For objective 4, inductive analysis to identify codes and key themes within the responses to the open-ended questions was used following the framework of thematic analysis suggested by Braun and Clarke (2006): (1) familiarisation of data (data were transcribed, data were read and re-read, ideas were noted down), (2) generating initial codes (interesting features of the data were written down, data relevant to each code were collated), (3) searching for themes (codes were placed into various themes, data relevant to

each theme were selected), (4) reviewing themes for validity and reliability (themes were checked, a thematic map was generated), (5) defining and naming themes (ongoing analysis was performed that refined each theme, names for each theme was generated), (6) producing the report (a final analysis was conducted and the scholarly report produced).

### Validity, reliability, trustworthiness and rigour

This research study employed an integrated, systematic and stringent approach to ensure that both quantitative and qualitative aspects were robust and credible, as outlined below (Stahl and King 2020):

- ▶ Pilot study: where content, construct and face validity were assured.
- ▶ Internal consistency: the consistency of the results across items within a test was ensured using Cronbach's alpha, which was  $>0.7$ .
- ▶ Inter-rater reliability: the extent to which the different raters gave consistent estimates of the same observation was measured, and comparable with a kappa statistic of 0.7, indicating substantial agreement (McHugh 2012).
- ▶ Credibility: the findings of this study were shared with the research participants to confirm that they accurately reflected the participants' experiences.
- ▶ Transferability: a detailed description of the context and participants, enabling others to determine if the findings may apply to their context, was employed in this study (Stahl and King 2020).
- ▶ Dependability: the research process is documented logically, allowing others to understand how conclusions were reached and replicate the study if necessary (ATLAS.ti 2023).
- ▶ Confirmability: during the inductive analysis phase, the identified themes were refined and analysed through inter-rater agreement to ensure reliability (Gisev *et al* 2013).
- ▶ Triangulation: multiple data sources, methods and investigators were used to cross-check data and interpretations.

To mitigate recall bias, the study used multiple data sources, including both caregiver self-reported surveys and retrospective record reviews. Cross-referencing caregiver responses with therapy records provided an additional layer of validation to reduce reliance solely on memory.

## RESULTS

### Study sample and demographics

Twenty-three parents of DHH children identified at special schools for children with hearing loss participated in the study. Table 1 depicts the sociodemographic profile of the 23 parents.

Of the 23 participants, 22 mothers and 1 father completed the survey. The participants' ages ranged between 33 and 54 years. The participants represented all four recognised race categories in South Africa (Posel 2001). According to table 1, the educational level of 43% of the participants was equivalent to a National Senior Certificate (high school diploma), and 53% of the participants had either a college diploma, a baccalaureate degree or a postgraduate degree. Seventeen per cent of the participants were unemployed, and 30% were single parents, divorced or separated. Thirty-nine per cent of participants reside in a low socioeconomic residential area in comparison with 4% residing in an upper socioeconomic residential area. The associations of the sociodemographic profile are depicted in the online supplemental table A.

## Exploring the parental involvement in the communication therapy of children with hearing loss

The following results are depicted in [table 2](#).

The participants indicated that one of two therapy approaches is being implemented at the schools where their DHH children are enrolled. A large majority of the participants (70%) indicated that LSL-SA was being used, while the remaining minority (30%) indicated the use of TSLT.

Of the total sample, 13% of the participants indicated that they chose the therapy approach by themselves, 35% made a joint decision with the early interventionist and more than half of the participants (52%) reported that the early interventionist independently chose the therapy approach for their child with a hearing loss.

All children were receiving therapy during the data collection period, with therapy provided at school but not necessarily only during school hours, as some sessions were scheduled in the afternoons. When exploring the frequency of therapy sessions received by the child, results range from a maximum of daily therapy attendance (4%) to a minimum of once a month (35%).

Less than half (43%) of the participants indicated that they never attend therapy sessions with their child. Similarly, a congruent number (43%) of participants indicated they always attend therapy with their child.

Online supplemental table B depicts the associations between how the communication approach was chosen and how often the parent attends therapy with the child, which shows no significant associations ( $p=0.21$ ). There was also no significant association between the frequency of therapy that the child with a hearing loss attends and how often the parent attends therapy with the child ( $p=0.38$ ).

Parents whose children received LSL-SA therapy reported higher satisfaction with communication outcomes compared with those in TSLT. This disparity suggests that the parent-coaching model of LSL-SA may better align with family-centred principles.

### Determining the communication skills of DHH children on discharge from therapy and their academic outcomes at the end of the foundation phase at school in order to assess parental confidence in applying communication therapy techniques at home

All participants who attended therapy sessions with their child with hearing loss indicated confidence in applying the therapy

techniques at home, irrespective of the therapy approach. The communication outcomes and academic outcomes are depicted in online supplemental tables C,D, respectively, as predictors of parental confidence.

Eighty-one per cent of DHH children enrolled in LSL-SA achieved age-appropriate communication outcomes in speech, expressive vocabulary, receptive language, expressive language, audition and cognitive-linguistics. This is in comparison with the 33% of children in TSLT who achieved age-appropriate communication in expressive language, 50% in expressive vocabulary, 67% in speech and receptive language and 83% in audition and cognitive-linguistics.

60%–67% of the DHH children in which an LSL-SA approach was followed achieved 70%–100% in English, Afrikaans, Mathematics and Life Skills subjects at school. This is in comparison with 13% of the DHH children in whom a TSLT approach was followed who achieved 70%–100% in English and Afrikaans, and 0% achieved 70%–100% in Mathematics and Life Skills.

### Establishing parental perceptions about the cultural and linguistic appropriateness of communication therapy techniques implemented and materials used in therapy

The parental perceptions of the cultural and linguistic appropriateness of communication therapy techniques (i.e., therapy aims and home programmes) and the materials (i.e., toys and books) used in therapy are depicted in [table 3](#). While 100% of parents found therapy materials linguistically appropriate, fewer than 30% perceived them as culturally appropriate, highlighting the need for more inclusive resources.

There was no significant association between the type of communication therapy approach and the cultural appropriateness of any communication therapy techniques implemented and materials used in therapy.

### Determining the perceived facilitators and barriers regarding the communication therapy approach

The parental perception of the facilitators and barriers regarding the communication therapy techniques was examined using inductive analysis to identify codes and key themes within the responses to the open-ended questions.

When performing inductive thematic analysis in establishing facilitators and recommendations, the following six themes, as

**Table 3** The association between communication therapy approaches and cultural and linguistic appropriateness (n=23)

Characteristic	Category	Type of communication intervention						P value
		Overall		TSLT		LSL-SA		
		N	%	N	%	N	%	
N		23		6		16		
Toys	Culturally appropriate	6	26	2	33	4	25	>0.99
	Linguistically appropriate	23	100	6	100	16	100	>0.99
Books	Culturally appropriate	5	22	1	17	4	25	>0.99
	Linguistically appropriate	23	100	6	100	16	100	>0.99
Home programme	Culturally appropriate	7	30	2	33	5	31	>0.99
	Linguistically appropriate	23	100	6	100	16	100	>0.99
Therapy aims	Culturally appropriate	4	17	0	0	4	25	0.54
	Linguistically appropriate	23	100	6	100	16	100	>0.99
Other	Culturally appropriate	3	13	0	0	3	19	0.53
	Linguistically appropriate	6	26	2	33	4	25	>0.99

LSL-SA, listening and spoken language-South Africa; TSLT, traditional speech-language therapy.

Table 4 Themes and sample quotes (n=23)

Themes	Sample quotes	
	LSL-SA	TSLT
1. Spoken language surmounts boundaries	'Spoken language and not sign language allows interaction with people'. 'Gives them more confidence to communicate with people'. "Spoken language works for both of us".	"My daughter is able to interact and converse with people. She has developed somewhat adequate spoken language ability as a result of her therapy sessions".
2. Fostering an environment of togetherness	"LSL is absolutely positive because we talk with her at home all the time". "It worked for both of us". "She is just like her brother and sister now".	"Being able to communicate gives us a sense of togetherness".
3. Benefits of therapy on communication skills development	"His vocabulary expanded at a good pace". "It has built her listening skills; her spoken language has increased, and more vocabulary as well". "My child can now follow instructions". "My child learned to listen and speak". "We achieved listening goals for my little girl". 'It provided language enrichment' 'Speech and language development is amazing'.	
4. Parent empowerment	"They have equipped me to support my child's language development". "Through implementing everything learned in therapy in our daily lives, she learned so quickly. I have also taken the skills and knowledge I learned through the sessions and applied them to my two other kids who are not hearing impaired. It helps them to recognise sounds, communicate and learn much quicker".	
5. Academic achievements as an indicator of positive therapy outcomes (online supplemental table D)	"She would not be where she is without the therapy. She is an A-grade student. She stopped CAPS in grade 7 and moved to the Cambridge syllabus. My child could not talk initially. I am thankful for all the LSL therapy she received".	"Therapy allows him to learn".
6. Skilful and adept early interventionists	"We received excellent therapy". 'The LSL-SA therapists are the best of the best and seriously know what they are doing'.	"The therapist was open to different approaches and tried more than once to explore and find suitable solutions to improve my daughter's linguistic development". "I thought that the speech therapy my daughter received was of a high standard, and I value the efforts that were made to support her development". "The therapist often thought out of the box and tried various techniques. My daughter preferred to make use of spoken language, although we struggled to understand her at times. She is still very aware that her pronunciations are not always correct, and the therapy she received laid the foundation for her to experience this in a positive light, rather than feeling insecure about it as she was rewarded for trying, not for succeeding". "Some of the unorthodox approaches the therapist used prompted a deeper understanding and language development, which she enjoyed thoroughly and which I think worked really well".

LSL-SA, listening and spoken language-South Africa; TSLT, traditional speech-language therapy.

depicted in table 4, emerged, with sample quotes: (1) spoken language surmounts boundaries; (2) fostering an environment of togetherness; (3) benefits of therapy on communication skills development; (4) parental empowerment; (5) academic achievements (depicted in online supplemental table D) as an indicator of positive therapy outcomes and (6) skilful and adept early interventionists.

### Theme 1: Spoken language surmounts boundaries

Parents consistently highlighted that spoken language offered their children opportunities to integrate better into their social and educational environments. One parent shared, 'Spoken language and not sign language allows interaction with people', emphasising how LSL-SA (adapted auditory verbal therapy) provided their child with the tools to communicate more broadly. Another noted, "My daughter is able to interact and converse with people. She has developed somewhat adequate spoken language ability as a result of her therapy sessions". These reflections suggest that families perceived spoken language as a means to break down barriers, offering their children greater inclusion in a predominantly oral society. Parents who experienced challenges with other modes of communication expressed a preference for LSL-SA due to its alignment with societal norms and expectations.

### Theme 2: Fostering an environment of togetherness

Several participants remarked on how therapy facilitated a sense of cohesion within their families. One parent stated,

"LSL is absolutely positive because we talk with her at home all the time", underscoring the importance of family participation in therapeutic activities. Another parent reflected, "She is just like her brother and sister now", indicating that therapy helped normalise their child's interactions within the family unit. Parents frequently mentioned that therapy brought them closer to their children by enabling open communication, thus fostering stronger familial bonds. This sentiment aligns with the principles of FCI, which emphasise collaboration between parents and professionals to support the child's development.

### Theme 3: Benefits of therapy on communication skills development

Parents overwhelmingly reported improvements in their children's communication skills following therapy. One parent remarked, "His vocabulary expanded at a good pace", while another noted, "It has built her listening skills; her spoken language has increased, and more vocabulary as well". The development of language and auditory skills was highlighted as a significant outcome of therapy. Participants shared examples of their children following instructions more effectively, engaging in conversations and achieving specific listening goals. These findings demonstrate the tangible benefits of structured, consistent intervention.

### Theme 4: Parental empowerment

Empowerment emerged as a recurring theme, with parents emphasising the knowledge and skills they gained through

therapy. One parent stated, “*They have equipped me to support my child’s language development*”, reflecting the impact of the coaching model used in LSL-SA. Another parent highlighted how these skills extended beyond their DHH child: “*I have also taken the skills and knowledge I learned through the sessions and applied them to my two other kids who are not hearing impaired*”. This illustrates how therapy benefits the child and enhances the overall communicative environment within the family.

#### Theme 5: Academic achievements as indicators of positive therapy outcomes

Participants linked their children’s academic success to the outcomes of therapy. One parent shared, “*She would not be where she is without the therapy. She is an A-grade student. She stopped CAPS in grade 7 and moved to the Cambridge syllabus*”. This finding highlights the role of communication intervention in supporting educational attainment. Parents attributed their children’s ability to excel academically to the foundational language and cognitive skills developed during therapy.

#### Theme 6: Skilful and adept early interventionists

Parents praised the expertise and adaptability of the early interventionists who worked with their children. One participant noted, “*The LSL-SA therapists are the best of the best and seriously know what they are doing*”. Another commented, “*The therapist often thought out of the box and tried various techniques to improve my daughter’s linguistic development*”. This theme raises the importance of professional competence in delivering effective and responsive therapy, particularly in culturally and linguistically diverse settings.

When performing inductive thematic analysis in establishing barriers, the following two themes, as depicted in [table 5](#), emerged, with sample quotes: (1) the constraints of English as the language of instruction and (2) perceived barriers to communication skills development.

#### Theme 1: The constraints of English as the language of instruction

A major barrier identified was the predominance of English in therapy sessions, which many parents found limiting. One parent stated, “*It would be nice to add other African languages, such as Sesotho, Tsonga, etc, as a medium to do therapy*”. This reflects the broader challenge of linguistic diversity in South Africa, where therapy resources and professionals often fail to accommodate the multilingual needs of families, a large majority of

which do not speak English or Afrikaans—which are languages mostly spoken by professionals. Parents highlighted the need for culturally and linguistically appropriate materials to support effective communication.

#### Theme 2: Perceived barriers to communication skills development

Some parents expressed frustration with certain aspects of therapy, particularly in the TSLT approach. One participant stated, “*I found my daughter struggled with picture exchange communication; it worked well but was frustrating and cumbersome to implement and practice*”.

This theme points to the limitations of certain methods and the need for more adaptable and personalised approaches that cater to the child’s unique needs and family context.

Identifying whether the parents would have preferred a different therapeutic communication approach to be implemented in therapy. None (0%) of the participants whose DHH children received LSL-SA would have preferred a different therapeutic communication approach, whereas 30% of the participants whose DHH children received TSLT would have preferred a listening and spoken language approach as the alternative.

## DISCUSSION

A culturally representative sample of 23 parents of DHH children who received LSL-SA or TSLT was used in the analyses of the current study. The cohorts of DHH children were matched for degree of hearing loss and attendance at special schools for children with hearing loss up to grade 3 (foundation phase).

Childhood hearing loss impacts the family and often leads to elevated stress levels, which may, in turn, negatively impact parent-child interaction and, consequently, the child’s development (Blank *et al* 2020; Dall *et al* 2022). When examining the impact of parental education and socioeconomic status on the development of DHH children, it is evident that higher parental education is decisively linked to better outcomes in both communication and academics. Specifically, DHH children with parents who have higher levels of education demonstrate a greater likelihood of achieving age-appropriate communication skills in expressive vocabulary and auditory abilities. Furthermore, higher parental education was associated with improved academic outcomes in subjects such as Social Sciences, Natural Sciences and Technology. These findings corroborate previous research by Cupples *et al* (2018) and Ching *et al* (2018), which

**Table 5** Themes and sample quotes

Themes	Sample quotes	
	LSL-SA	TSLT
1. The constraints of English as the language of instruction	‘It would be nice to add other African languages, such as Sesotho, Tsonga, etc, as a medium to do therapy’. “As English is not my home language, it can be a bit difficult to fully understand what goes on in therapy, but therapists always try to explain in a way I can understand”.	
2. Perceived barriers to communication skills development		“He doesn’t talk”. “I found my daughter struggled with picture exchange communication; it worked well but was frustrating and cumbersome to implement and practice”. “I saw a speech therapist after who did not do the LSL-SA approach and I was disappointed. I believe the mission and vision of the approach created great professionals. All therapists need to understand the system and approach. Especially how they encourage parents to get buy-in”.

LSL-SA, listening and spoken language-South Africa; TSLT, traditional speech-language therapy.

highlights the benefits of higher maternal education on the outcomes for DHH children, and the evidence presented underscores that while higher parental education is beneficial, the comprehensive impact on DHH children's development also hinges on the degree of hearing loss of the child, the hearing technology fitted and language performance remedied through early intervention (Chen and Liu 2021).

The findings of this study suggest that parental employment and marital status were not significantly associated with the frequency of parental involvement in therapy sessions or the reported confidence in applying communication strategies at home. However, it is important to note that this study did not directly assess the language competence or academic outcomes of the DHH children as outcomes. Therefore, any claims regarding the impact of these parental factors on language and academic outcomes are beyond the scope of this research. Further studies that directly investigate these relationships are needed to draw such conclusions. These findings are consistent with research data by Kaipa and Danser (2016) and Binós *et al* (2023). This may imply that families from lower socioeconomic status may still provide sufficient input for their children with hearing loss, as the outcome of language acquisition and academic performance is an interplay between the (1) LSL-driven programme by the early interventionist and (2) carryover of language support strategies by the parents. Therefore, addressing these interconnected factors is crucial for optimising outcomes for DHH children.

Bailey (2001) emphasises parental involvement on two levels: (1) behaviours that range from bringing the child to the intervention centre and attending the therapy sessions and (2) parental confidence in implementing the professionals' recommendations at home. When exploring the parental involvement and confidence in the communication therapy of DHH children, participant demographics in the current study support the finding of Zaidman-Zait *et al* (2018) that mothers were significantly more involved than fathers in the communication intervention process. Research reports that mothers show higher interest and are more actively engaged with professionals in their child's communication intervention (Zaidman-Zait *et al* 2018). These results have direct implications for parental involvement in communication intervention programmes for children with hearing loss. The findings of this study suggest the importance of understanding the cultural dimensions of the involvement of both parents, especially in the South African context, which will equip early interventionists to better support parents and provide family-centred care service delivery (Zaidman-Zait *et al* 2018).

When exploring how the communication approach was chosen, the findings of this study indicate that the early interventionist chose the therapy approach independently in the majority of cases (52%) for the child with hearing loss. These findings concur with the findings of Harris *et al* (2021), which illustrated a dislocation between the practice of informed choice, the notion of unbiased support and debunked claims of neutrality of early interventionists. These findings further concur with studies by Shezi and Joseph (2021), Prendergast *et al* (2002), Young (2002), Beazley and Moore (2013), Eleweke and Rodda (2000), Young (2003), Young *et al* (2005a) that early interventionists filter a substantial amount of information and do not tell parents about more than one communication option, indicating that the informational counselling provided by early interventionists is limited and biased (Shezi and Joseph 2021; American Speech-Language-Hearing Association 2008). Informational counselling practices may have implications that infringe on parental-informed decision-making and affect the

collaboration of a family-professional relationship considerable of family values, goals and aspirations. It is, therefore, likely that the participants in this study ultimately internalised the views and opinions of the early interventionists who chose the communication approach on their behalf and then accepted these views as their own (Decker *et al* 2012).

Parental involvement in the intervention process is a well-established predictor of spoken language outcomes, cognition, prereading skills and future educational success in DHH children (Calderon 2000; Cejas *et al* 2021; Moeller 2000). Less than half of the participants (44%) never attend therapy sessions with their child. These findings concur with the Gray Group International Insights (2023), attributing possible challenges to the accessibility of parents attending intervention sessions to geographic factors, financial constraints and limited availability of providers, confounded by single-parent households and the parental employment status of the participants in this study. These context-specific challenges are immense but not insurmountable. The cochlear implant programmes in South Africa typically drive EHDI services, with three of the 12 programmes within the public healthcare sector and four combined within the public and private healthcare sectors (Bhamjee *et al* 2022). These public healthcare sector programmes strive to ensure that EHDI services are available to all families enrolled in these programmes, regardless of location or financial situation. The programmes at the special schools attended by the participants' DHH children offer these parents an initial, compulsory, family support and guidance programme to (1) promote language and brain development, (2) provide counselling and emotional support services to families of DHH children to accept the diagnosis, (3) audiological management of the hearing loss and (4) taking cognisance of the home environment to upskill parents to intensify the progress of the DHH child (Western Cape Government 2022). These programmes may be the reason why, despite parents no longer attending therapy sessions with their children during school-based intervention, they can still play a key role in their children's intervention for hearing loss.

Changes in the delivery and models used for communication programmes have evolved to be more parent-focused and family-focused (Calderon 2000). When determining parental confidence in applying the communication therapy techniques at home, all the participants confirmed their confidence. The findings of this study, regarding age-appropriate communication outcomes and the meritorious academic outcomes of DHH children, align with the literature, which suggests that parental confidence in following communication strategies and guidelines at home, as prescribed by the early interventionist, enhances their child's language acquisition (Ingber and Most 2018). These findings further indicate that parent guidance and effective coaching allow the parent to follow the early interventionist's advice, unrelated to the service setting, irrespective of the therapy approach (i.e., LSL-SA or TSLT) (Kellar-Guenther *et al* 2014).

While establishing parental perceptions about the cultural and linguistic appropriateness of communication therapy techniques implemented and materials used in therapy, the findings of the current study indicate no significant association between the type of communication therapy approach and the cultural appropriateness of any of the communication therapy techniques implemented and materials used in therapy. Current findings indicate linguistic appropriateness but limited culturally sensitive materials across both domains (i.e., therapy techniques and therapy materials), irrespective of the therapy approach (i.e., LSL-SA or TSLT). This concurs with findings by Grandpierre

*et al* (2019), Southwood and Van Dulm (2015) and Wieber and Sumner (2015) that materials used during language interventions are not reflective of cultures in diverse contexts. This finding is particularly relevant in the provision of communication intervention services in the South African context, as it acknowledges the challenge of meeting the cultural demands of families and children with hearing loss. These findings highlight that early interventionists remain accountable for acquiring reliable and valid evidence for outcomes and employing resources from a cultural and linguistic perspective (Health Professions Council of South Africa 2019). When interventions are implemented in a culturally proficient manner, a plausible corollary would be an enhanced family-professional relationship (Moeller *et al* 2013).

In determining the perceived facilitators and barriers regarding the communication therapy approach, this study indicates the following findings:

*Positive findings* were expressed by participants, specifically that spoken language surmounts boundaries and fosters an environment of togetherness. These findings concur with the literature that in the LSL-SA approach, parents do not have to learn a new language or communication mode, as this approach can be seen as a reliable solution for DHH children (Rhoades and Duncan 2017; Slentz and Krogh 2017; White and Brennan-Jones 2014). These findings likely strengthen the case for LSL-SA as the approach of choice, as the primary concern of families of infants with hearing loss is how they will develop spoken language (Binos *et al* 2021). South African studies have produced empirical evidence highlighting age-appropriate communication outcomes following an LSL-SA approach (Casoojee *et al* 2024). This implies that professionals providing EHDI services are duty-bound to support parent communication choices, ensuring the child achieves spoken language outcomes (Houston and Stredler-Brown 2012).

Participants expressed that the LSL-SA therapy benefitted their child's communication skills development and benchmarked their child's academic outcomes as an indicator of positive therapy outcomes. This is congruent with findings of various comparative studies demonstrating that DHH children receiving an LSL approach are more likely to outperform those DHH children receiving TSLT, yielding higher odds of performing at age-equivalent measures of speech perception, language outcomes and academic achievements (Casoojee *et al* 2024; Yanbay *et al* 2014; Dettman *et al* 2013; Motasaddi-Zarandy *et al* 2009; Percy-Smith *et al* 2018; Fairgray *et al* 2010).

The participants in this study acknowledge that the early interventionists were skilful and adept and contributed to parent empowerment, regardless of the communication therapy approach. The current study findings concur that early interventionists who enhance the family's understanding of the infant's strengths and needs are more likely to promote the family's ability to advocate for the child with hearing loss (Health Professions Council of South Africa 2018). Hence, families should be equipped and empowered to make informed decisions regarding the communication approach to be adopted for their DHH child (Centers for Disease Control and Prevention 2018).

Participants highlighted perceived barriers. Current study findings indicate the constraints of English as the language of instruction. These findings are twofold. First, the findings are particularly relevant in the provision of the LSL-SA communication approach in the South African context. These results are confirmatory with the findings of a study conducted by Mdladlo *et al* (2016), indicating that the average SLT and audiologist in the South African context is predominantly either an English or Afrikaans-speaking

female, with only 5% of SLTs and audiologists speaking an African language as a first language in South Africa (Khoza-Shangase and Mophosho 2018). This highlights the predominance of English in the profession and the ongoing challenge of meeting the demands of families when implementing an LSL-SA approach (Mdladlo *et al* 2016). South Africa's history of apartheid, its multicultural and multilingual nature, as well as its socioeconomic inequalities pose unique challenges to early interventionists providing clinical services to children with hearing loss, often restricting effective service delivery (Fouché-Copley *et al* 2016; Samuels *et al* 2012).

The current study findings concur with studies conducted by Taylor (2016) and Casoojee *et al* 2024 and confirm that the majority of DHH children receive communication intervention in their second language. LSL-SA is premised on principles that employ developmental patterns of listening, language, speech and cognition to stimulate natural communication and provide support services to facilitate children's educational and social inclusion in mainstream education (Joint Committee on Infant Hearing 2019b). Taylor (2016) confirms that LSL-SA interventionists have highlighted linguistic diversity as a challenge to successfully implementing the approach within the South African context. Consequently, there is a possible lack of family-centred EHDI within these contexts. These findings highlight the importance of family involvement and collaboration between EHDI service providers and parents.

Another finding was perceived barriers to achieving adequate communication skills using the TSLT approach. To date, the research and clinical focus in South Africa has been on adapting international EHDI principles for early identification and detection of hearing loss via screening methods (Khan *et al* 2018; Moodley and Storbeck 2015; Störbeck and Young 2016). The intervention aspect of EHDI in South Africa has been neglected. Consequently, there is limited research identifying patient outcomes based on context-specific intervention methods once hearing loss has been identified (Moodley and Storbeck 2015). The current study findings are consistent with Casoojee *et al* (2024) and Percy-Smith *et al* (2018), demonstrating that DHH children enrolled in LSL-SA outperformed those enrolled in TSLT in achieving age-equivalent language outcomes. The current study findings further support that LSL-SA graduates achieved superior academic outcomes dependent on language attainment, providing contextually relevant evidence supporting the effectiveness of the LSL-SA communication approach in South Africa (Casoojee *et al* 2024).

When identifying whether the participants would have preferred a different therapeutic communication approach to be implemented in therapy, a third of the parents of DHH children enrolled in TSLT would have chosen an LSL approach. This confirms the evidence presented by Auditory Verbal UK (2023) and Li *et al* (2003) that an LSL approach is a more robust, family-centred coaching programme when compared with TSLT. This implies that LSL early interventionists are obligated to equip parents with the tools to support the development of their child's spoken language through listening.

## CONCLUSION

The findings of this study emphasise that early interventionists who work with DHH children should take cognizance of the interplay of many factors beyond the extent of the

child's hearing loss to optimise therapeutic outcomes. Specifically, the study reveals significant gaps in the informational counselling provided to parents, which affects their ability to make fully informed decisions about communication options. It is incumbent on early interventionists to adhere to the Joint Committee on Infant Hearing and HPCSA guidelines regarding the provision of aural rehabilitation in LMICs, where healthcare and socioeconomic risk factors are present due to inequitable systems of care. This study further highlights the need for targeted training and capacity building for early interventionists, which emphasise the importance of understanding and integrating parental perspectives and local cultural contexts into their practices. This will improve the quality of interventions and align them more closely with the needs and preferences of families. Fostering collaborative efforts among relevant stakeholders, including policymakers, is crucial. Collaborative initiatives can help address the systemic barriers identified in the study, promote the development of culturally and linguistically appropriate therapy materials and support a more inclusive approach to early intervention. While we recognise the need for thoughtful re-examination of policy to practice, results of this study suggest communication interventions must be cognizant of local contexts, which will ensure more effective and more respectful early interventionists of the diverse needs and preferences of the families they serve.

This study has several limitations that should be considered when interpreting the findings. First, the small sample size of 23 caregivers limits the generalisability of the results, as it may not fully represent the diverse population of caregivers of DHH children in South Africa. Second, the retrospective design, with data collection spanning a time-frame as far back as 2008, introduces the potential for recall bias, as caregivers may have difficulty accurately remembering details of their involvement in therapy over extended periods. To address this, data were cross-validated with retrospective records where available; however, this does not entirely eliminate the risk of bias. Additionally, the study relied on self-reported data, which is inherently susceptible to social desirability bias, potentially influencing caregivers to portray their involvement or perceptions in a more favourable light. Another limitation is the lack of linguistic and cultural diversity in therapy resources, which may have influenced caregivers' perceptions of cultural appropriateness and therapy outcomes. Lastly, the study did not include perspectives from professionals or other family members, which could have provided a more holistic understanding of the FCI process. Despite these limitations, the findings contribute valuable insights into the challenges and facilitators of communication interventions in the context of multi-lingual and multicultural settings.

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