Perceptions about language development of isiXhosa-speaking primary caregivers of young children receiving speech-language therapy in the Eastern Cape, South Africa

by

Lara May Bentley

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SUPERVISOR: Prof Juan Bornman

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Full names of student: Lara May Bentley

Student number: u18344918

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The author declares that she has observed the ethical standards required in terms of the University of Pretoria's Code of Ethics for Research and the Policy guidelines for responsible research.

ABSTRACT

Background: Research on communication intervention with young children provides support for the involvement of primary caregivers in their child's language intervention (Kaiser, & Roberts, 2011; Roberts, & Kaiser, 2011). Research suggests that the perceptions of these caregivers regarding their child's language development and their role in the language development process are important to their willingness to use intervention strategies (Kaiser, & Hancock, 2003; Leffel, & Suskind, 2013). Furthermore, studies suggest that the severity of child language difficulties may impact on these perceptions (Brady et al., 2006; Romski et al., 2011). However, there is a lack of research on how primary caregivers from non-Western, non-English-speaking backgrounds perceive their child's language development and understand their role.

Aims: The study investigated the perceptions of isiXhosa-speaking primary caregivers of children who receive speech-language therapy regarding their child's language development across three expressive language groups (i.e. not speaking, speaking in single words and phrases, speaking in sentences). Perceptions on the basis of duration and frequency of the speech-language therapy, and child age are also described.

Methods: Thirty primary caregivers of young children (30 to 70 months) completed the South African Caregiver Perception of Language Development (SA-CPOLD) in a structured interview format using the Talking Mats™ visual framework (Murphy, & Boa, 2012). These results were compared across three child expressive language groups, as determined by scores on the Mullen Scale of Early Learning, and language sample analysis data (i.e. mean length of utterance and number of different words).

Results: The primary caregivers of the children who were speaking in either single words and phrases or speaking in sentences demonstrated more positive perceptions than caregivers of children who were not speaking, although this did not reach a conventional level of significance. Caregivers of children across the three expressive language groups acknowledged their child's language difficulties, however primary caregivers of the children who were non-speaking agreed more with statements related to their child's difficulty. Perceptions did not appear to differ on the additional variables (i.e. duration and frequency of speech-language therapy, and child age).

Conclusion: The results of the present study suggest that isiXhosa-speaking caregivers' perceptions of their child's language skills are related to their expressive language skills to some extent and that these caregivers are able to accurately report on their child's language difficulties.

Keywords: caregiver perceptions, disability and developmental delays, early language intervention, isiXhosa, language delays, South Africa

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1. PROBLEM STATEMENT AND LITERATURE REVIEW

1.1 Language Development and Intervention

Language can be defined as "*an organized system of arbitrary and rule-governed structures that are used as a means of communication*" (Brandone, Salkind, Golinkoff, & Hirsh-Pasek, 2006), p 499). It comprises three primary components: the content, form and use of language that describes the concepts being communicated; and the symbols used to represent them, and the use of language in context. In addition, language is typically separated into receptive and expressive components in order to include both the comprehension and production of language. In the language acquisition process, children must develop skills in each of these areas in order to communicate successfully and integrate into society. Theories of language development mention the importance of linguistic input to the process of language acquisition (Brandone et al., 2006). Vygotsky's social constructivist theory emphasises the importance of daily social interactions and activities in which children engage in order to make meaning of linguistic information so as to learn language (Bruner, 2004; von Tetzchner, & Grove, 2003). This theory places much emphasis on the importance of human culture, and specifically, the presence of more advanced language models in the child's environment, to facilitate the successful development of language (Service, Locke, & Chandler, 1989). The belief that these linguistically mediated interactions influence the process of language development and that the quality of the input provided by the environment can ultimately affect the skills acquired, is the premise on which language intervention is based (von Tetzchner, & Grove, 2003).

Language intervention is typically provided by a speech-language therapist (SLT) to children who exhibit delayed or disordered language development for a wide variety of reasons. The term language delay is typically used to define language skills that are

developing according to typical patterns, but at a slower rate than is expected at the child's age. In contrast, a language disorder describes language abilities that deviate from typical development in one or more of the three linguistic components. Communication difficulties may be the primary impairment or a secondary impairment that occurs as a result of a medical diagnosis (Brandone et al., 2006). In addition, the disability may be congenital or as a result of an acquired condition. Disabilities commonly associated with communication difficulties include, but are not limited to, hearing impairment, intellectual disability (ID) and other disorders associated with ID, autism spectrum disorder (ASD), traumatic brain injury, seizure disorders, foetal alcohol syndrome (FAS) and certain types of emotional disturbances (Paul, & Norbury, 2012). Children who display communication difficulties, regardless of aetiology, will require language intervention in order to improve their language and communication skills.

The type of language intervention required by a specific child will vary according to the child's unique characteristics and language profile (Paul, & Norbury, 2012). Language intervention may aim to improve language skills in the spoken modality but, in some cases, the use of augmentative and alternative communication (AAC) interventions, to facilitate the acquisition and use of language and communication skills, may be warranted (Loncke, 2014). An important component of AAC intervention is that it entails the use of a modality (e.g. manual signs, graphic symbols, etc.) to augment or replace spoken language in cases where spoken language does not meet all the communication needs of the individual (Beukelman, & Mirenda, 2013). Examples of children who may require AAC intervention include those with ID, cerebral palsy (CP) and ASD; however, a child's diagnosis alone does not determine the approach to intervention (Paul, & Norbury, 2012). The severity and level of support each child requires will vary significantly from child to child, based on, among other things, developmental level, but could range from promoting prelinguistic skills to supporting comprehension and use of single spoken words or symbols to the expansion of words or symbols into sentences and beyond.

1.2 The Role of Primary Caregivers in Language Intervention

Bronfenbrenner's Ecological Systems Theory (1979) brought the family's role in intervention to the fore by acknowledging that primary caregivers (typically parents) have

many more opportunities to embed learning experiences into their child's day than other individuals in the child's life. In Bronfenbrenner's subsequent work on the role of the family in child development (1986), the influence of environments and factors outside of the immediate family environment were also emphasised. He describes how factors in environments such as the child's daycare or school or parental employment may also have a profound effect on the developing child (Bronfenbrenner, 1986). Thus, in the field of language intervention, there is an acknowledgement that the interactions that occur between a caregiver and child and in the child's natural environments are more likely to have a profound effect than intervention being delivered in sessions by a therapist (Dunst, Bruder, Trivette, Hamby, Raab & McLean, 2001). The acknowledgement of the importance of these interactions has had far-reaching consequences for language intervention models with many early intervention programmes now advocating for the use of a family-centred approach (Fey et al., 2006; Kaiser & Hancock, 2003).

Family-centred language intervention aims to benefit both the child with a communication disability and their families by using a service delivery model which emphasizes the role of the family as an equal collaborative partner and puts the control into the hands of the family for ultimate decision-making (Espe-Sherwindt, 2008). One of the important aspects of the family-centred approach lies in professionals sharing information and teaching new skills as a means to empower families (Dempsey & Dunst, 2004; Dempsey & Keen, 2016). The importance of involving the family in intervention planning and implementation has further evolved into an acceptance among interventionists that caregivers can be taught to implement intervention strategies with their children. This approach seems logical considering the number of parent-child social interactions that occur throughout the day and the fact that these interactions can be shaped into intervention opportunities (e.g. Fey et al., 2006; Kaiser & Hancock, 2003; Kaiser & Roberts, 2013). The use of this approach has demonstrated successful outcomes in young children with language difficulties (e.g. Roberts & Kaiser, 2015), even when intervention includes AAC (e.g. Romksi, Sevcik, Adamson, Cheslock & Smith, 2007; Steibel, 1999).

In spite of the growing body of research advocating for the use of a family-centred approach to language intervention, concerns have also been expressed about the training of

parents as interventionists. Among these are concerns regarding expecting parents to change their relationship with their child, shifting the focus away from parenting (Turnbull & Turnbull, 2001) towards becoming interventionists or assuming that parents are not adequately skilled to promote their child's development (Greene, 1999). In addition, Koegel (2000) cautioned therapists against advising parents to allocate specific time in their day for language intervention, as evidence suggests that this may cause an increase in stress among parents of children requiring language intervention. Furthermore, Jung (2003) reminds therapists that the role of routine-based language intervention is not that the family becomes consumed with delivering intervention, but that natural learning opportunities that occur throughout the day can be enhanced by encouraging parents and other caregivers to make use of these opportunities when appropriate.

In the context of family-centred service provision to young children and those who care for them, Balton (2004) highlighted the limiting effect of traditional views of families. For example, in South Africa, a child's primary caregiver may often be a grandmother, aunt or other adult well known to the child (Balton, Uys & Alant, 2019). This is in part due to the high prevalence of HIV/AIDS, which has had an impact on the composition of family structures (Moena, 2006). In addition, it has been estimated that approximately 23% of South African children do not live with either of their biological parents (Hall & Wright, 2011). Although, some of these children are orphans, the majority (eight of ten) are being cared for by another relative, even if the child has at least one living parent (Hall & Wright, 2011). Furthermore, some children may live in the same household as one of their biological parents, but are not primarily cared for by that parent (Samuels, 2015). In acknowledgement of this, there is a need for SLTs to include caregivers other than parents in their service provision. For the remainder of this study, for the sake of brevity, the term "caregiver" will be used to refer to the child's primary caregiver, which may be a biological parent or another individual who is primarily responsible for the child.

1.3 Systematic Search of Caregivers' Perceptions of their Child's Language Development

The aim of the systematic search was to identify studies that investigated caregivers' perceptions about their child's language development. The search terms used are provided in Table 1.

Table 1

Criteria of systematic search in PIO format

	Inclusion	**Exclusion**
Population	Caregiver* OR Parent* OR Mother* OR Father*	Teachers OR Educators OR Professionals
	AND	
Intervention/indicator	Language development OR Language acquisition OR Language learning	Motor development OR Motor skills OR Physical development OR Play OR Deaf OR Hearing impaired OR Hard of hearing
	AND	
Outcome	Perceptions OR Attitudes OR Opinion OR Views OR Beliefs	
Limiters: Peer-reviewed academic journal articles, published in English, all dates, only young children (excluded infants and children over the age of six years) and adults of all ages.		

The Boolean operators "OR" and "AND" were used as shown above. The databases searched included Academic Search Complete, CINAHL, E-Journals, ERIC, Health source: Consumer, Health source: Nursing, Humanities Source, masterFILE Premier, MEDLINE, psycARTICLES and psycINFO. The inclusion criteria were the following: (i) academic journal articles published in English; (ii) peer-reviewed journal articles; (iii) articles that investigated the perceptions of caregivers regarding their child's language or communication development; and (iv) caregivers who had young children with a language impairment and who require or were already receiving language intervention. Due to the high number of results yielded, the search was further limited by classification to exclude subjects that are irrelevant to children with language difficulties or parent perceptions.

The results based on the aforementioned criteria were as follows: 284 articles were identified by the database search after duplicates were removed, which included all limiters mentioned above. These articles were screened at title level, which resulted in the exclusion

of 244 articles, as they did not address caregivers' perceptions of their child's language development. The 40 remaining articles were screened at abstract level and 33 were excluded because of the following reasons: the articles did not specifically address parents' perceptions of language development, and/or the caregivers in the study did not have children with language impairment. One article each was excluded because they addressed parental collaboration in intervention, the validity of parent-report measures of language development and the impact of parent stress and child behavioural issues on perceptions of language. Two articles were identified from the reference lists of the abovementioned articles. This resulted in the inclusion of nine articles in the review and read at full text level. This is set out on the PRISMA format (Moher, Liberati, Tetzlaff & Altman, 2009) in Figure 1.

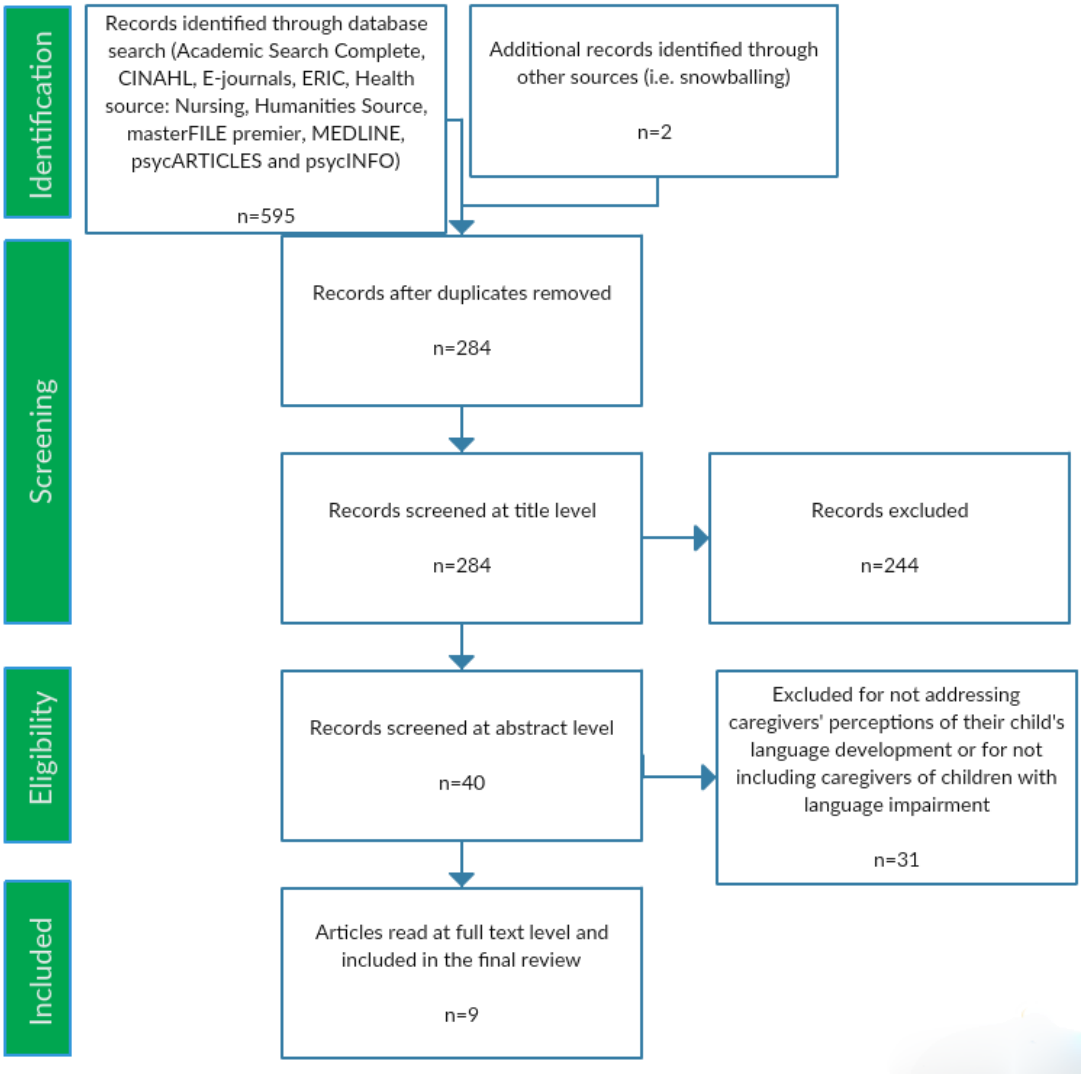


Figure 1. PRISMA search process for studies included in systematic search

Figure 1 shows the process followed to obtain the relevant studies included in this systematic literature search. Table 2 describes these nine studies according to their aim, participants, procedures followed and results. It also highlights the implications of these studies for the current study.

Table 2

Relevant literature from the systematic search

Authors and year	Aim	Participants	Procedures	Results	Implications for study
Marshall, Harding & Roulstone (2017)	To describe beliefs and reported practices regarding speech and language development, delay and parents reported responses to delay	52 parents or carers of children with speech and language delays from three different communities in England	Seven semi-structured focus groups	• A broad range of beliefs and opinions were expressed. • Themes: language development and the environment required; causes and signs that a child may have a communication delay; responses to concerns about communication development; and improving SLT services	• SLTs should become aware of how caregivers' beliefs may impact on the environmental setup for communication and family ability to participate in family-centred interventions. • SLTs should acquire information from families and become familiar with the families' cultures and beliefs. • Future research should investigate the impact of cultural variation on communication development.
Romski, Sevcik, Adamson, Smith, Cheslock Bakeman (2011)	To a) examine parent perceptions of toddler language development before and after participating in parent-coached interventions (two using speech-generating devices (SGDs) to augment communication and one using only speech), and b) to relate parent perception to child intervention outcome	53 parents and their children (20 to 40 months) who were at significant risk for speech and language impairment; had at least very basic intentional communication; gross motor skills that allowed them to touch symbols on a speech-	• Children randomly assigned to one of three interventions • 24 sessions • Parents completed Parent Perception of Language Development (PPOLD) • Includes perception of their child's language development and use of language, influences of the child's language	• Means related to success increased from pre- to post-intervention (seven of 10 significantly so). • Means assigned to the difficulty factor generally decreased, but most were not significant. • An unassigned item, which addressed the usefulness of technology for communication, increased significantly. • For success, parents, means were higher at post-intervention, while means related to difficulty were lower at post-intervention for the two augmented language groups.	• After a three-month parent-coached intervention, parents' perceptions about their child's success in communicating became more positive. • Their perceptions about the difficulty experienced decreased for the two augmented language groups. • The spoken language group perceived their child's communication impairment as being more severe. • Parents whose children had more spontaneous communication post-

		generating device (SGD) and had a primary disability other than a speech/ language impairment, hearing impairment or autism	and stresses related to their child's language development before and after the language intervention) • Items that relate to success and difficulty factors, but four items do not belong to either factor		intervention had more positive perceptions than those whose children were not speaking. • Assisting parents to improve interaction with their child may reduce negative perceptions regarding their child's difficulties.
Smith, Romski, Sevcik, Adamson Bakeman (2011)	To examine a) change in parent stress after parent-coached language intervention; b) effect of child expressive language skills on stress before and after language intervention; c) impact of improved language skills on stress scores post-intervention; and d) whether parent perceptions about their child's language development mediates the association between child expressive language and parent stress	60 parents of children with developmental delays and 10 or less spoken words who were already participating in a language intervention	The parents were asked to complete a parent stress measure (Parent Stress Index - Short Form (PSE-SF) (Abidin, 1995), the parent perceptions of language development (PPOLD) before and after participation in one of three 24-session parent-coached language intervention programmes	• Parent stress levels did not change significantly from pre- to post-intervention. • Negative correlation between expressive language scores and parent stress both pre- and post-intervention, but correlation post-intervention was significant. • The odds that parents stress decreased was twice as likely for the parents of children whose language skills increased pre- to post-intervention than for those whose did not, but not significantly. • Regression analyses revealed that parents' perceptions regarding their child's success in language development and their role did not significantly mediate child expressive language at pre-intervention and parent stress at post-intervention. • Perceptions regarding difficulty did mediate the relationship between child expressive language and parent stress.	• Parents were not particularly stressed at pre- or post-intervention, indicating that the availability of intervention, which improves their ability to affect positive developmental change in their child, may reduce stress levels. • Being directly involved in intervention does not appear to increase parent stress levels. • When children show improvements in expressive language ability during intervention, parent stress levels may decrease. • Parents who perceive their child's communication skills as more severe exhibited higher levels of stress. indicating that perception communication difficulties may be associated with parent stress levels. • Improving a child's expressive language skills may improve parents' perceptions, which may in turn decrease their levels of stress.
Marshall, Goldbart & Phillips (2007)	To describe, explore and explain the thoughts, understanding, knowledge, perceptions, beliefs	20 parents of preschool children who were referred to SLT services and 11 SLTs who work with	• Unstructured interviews with either one or both parents • Interviews with SLTS	• Parents and SLTs mentioned factors both internal to the child and external as important for language development. • Parents emphasised the role of gender and personality, while SLTs were concerned	• SLTs should consider parents' explanatory models of language acquisition and enquire about steps already implemented at home. • Emphasize the role of play in language development.

	and feelings regarding language development, delay and interventions of a group of parents and SLTs	preschool children with language delays		with the child's environment and listening skills. • Language delay (internal and external factors were mentioned): illness/disability (only SLTs), environmental factors (SLT: socio-economic status; parent: people in the child's environment) • Some parents blamed themselves for the delay, but were not sure what they had done. • Intervention: Parents saw themselves as experts on their children and were already attempting to help before attending SLT. Parents and SLTs emphasised the role of imitation, play and lowered expectations differently.	• Future research should focus on the perceptions of people from other cultural and linguistic groups.
Kummerer, Lopez-Reyna & Hughes (2007)	To examine Mexican immigrant mothers' perceptions and beliefs about a) their child's speech and language disabilities; b) their children's emergent literacy development; and c) the role of speech-language therapy	14 Mexican immigrant mothers (aged 26 to 38) from low socio-economic backgrounds and their children who were receiving centre-based early childhood intervention SLT services Children (aged 17 to 47 months) had expressive language delay as their primary diagnosis.	• Participant interviews • Information written in SLT therapy files • Logbooks	• Variable reasons for their child's communication impairment, but predominantly medical and familial • Understanding of expressive language skills evolved over time while mothers experienced difficulty in making judgments about child receptive language skills. • SLT services were beneficial and suggested the following improvements: SLTs speak Spanish, discuss the therapy process and timeframe, and discuss the family's role in intervention. • Mothers viewed the SLT as more knowledgeable and responsible for the intervention.	• Understanding parental beliefs and perceptions is important when providing intervention to Mexican immigrant families to ensure that intervention is culturally responsive. • Conventional intervention needs to be adapted to meet the needs of diverse populations.
Brady, Skinner,	To describe and provide additional qualitative information	55 mothers of young children (44 boys and 11	• Semi-structured interviews	• Mothers of non-verbal and emerging verbal children all expressed a desire for	• Mothers of non-verbal or emerging verbal considered their child's learning to communicate as important

Roberts, & Hennon (2006)	regarding a) communication in young children with fragile X syndrome (FXS); and b) family reactions toward and accommodations made for their child's communication differences	girls) with full mutation FXS across 50 states in the United States	• Questions related to mothers' perceptions of child temperament, behaviours, communication skills, expectations of child development, parental strategies to promote development, family roles and relationships, support and understanding of FXS • Content analysis • Compared across three groups: non-verbal, emerging verbal and verbal	their child to speak or communicate their needs, and reported using AAC. • A range of strategies for improving communication skills were reported with some group differences. • Some mothers reported that being a "teacher" or "therapist" took time away from being a mother. • Many mothers expressed a desire for SLT services that were not available. • Child's developmental level impacted on perceptions of mothers' role. • Mothers of verbal children reported taking on the role of "teacher" or "therapist" less than the other groups. • Expectations varied by group: non-verbal or emerging verbal group mothers desired for their child to begin producing speech; verbal group desired improved language skills and interaction with peers.	• For mothers who are willing to be involved in therapy, goals need to be individualised. • Mothers' perceived roles may impact on willingness to take advice. • Mothers of children with different communication skill levels implement different strategies to improve communication. • Mothers of more advanced children did not take on "therapist" and "teacher" roles as often. • Perceptions and expectations may vary depending on child developmental level: these tend to increase with child communication skills. • These findings appear to be common to families of children with other developmental disabilities.
Harty, Alant, Uys (2006)	To describe the level of self-efficacy of a group of mothers of children with communication difficulties and explore the relationship between perception of child communication ability and maternal feelings of competence	25 mothers of children (three to six years) with communication disabilities, including CP, pervasive developmental disability, language delay and general global developmental delay	• Questionnaires pertaining to parental self-efficacy and perceptions of their child's language abilities • Questionnaires had two sections, which were adapted from The Receptive-Expressive Language Test (REEL-2) 2nd Edition (Bzoch, & League, 1991) and the Parental Tasks Index (Coleman, 1998).	• Generally high ratings of self-efficacy were reported. • Mothers' reports of their child's language skills were similar to those commonly reported by professionals who work with children with communication disabilities, e.g. difficulty with providing information, better communication in structured settings, generally better receptive than expressive language skills. • Correlation results were positive, but weak between self-efficacy and perception of child language skills.	• Caregivers can accurately report on the communication skills of their children, but this does not necessarily translate into perceptions of competency in helping their child. • No significant correlation between maternal self-efficacy and perception of child language skills was found. Despite this, the authors propose that professionals still consider parental self-efficacy in intervention as it is likely that it may impact on parental behaviours and willingness to participate in their child's intervention.

Kummerer & Lopez-Reyna (2006)	To explore the beliefs and perceptions of Mexican Immigrant Mothers regarding a) early language development; b) their children's speech and/ or language development; and c) activities they find helpful to promoting early language and literacy interactions at home and during therapy	14 Mexican immigrant mothers (ages 26 to 38) and their children (aged 18 to 45 months) who were receiving SLT services for expressive language delays. Some children also had receptive language delays, speech production difficulties and hearing loss).	• Participant interviews • SLT files • Filed notes • Observations	• Recognised the role that family members play in a child's language development. • Reported that children learn language by instinct, through listening to others, by indicating needs and by explicit teaching. • Norms reported by mothers were generally different to those of SLTs. • Mothers experienced difficulty in making judgments about their child's receptive language skills. • Causal attributions were typically medical or familial (e.g. lack of extended family and family history, while one proposed a folk belief as a possible explanation. Some mothers felt that the child's delay may be due to laziness or the fact that the child was spoiled or did not wish to speak.	• Implications for SLTs working with Mexican immigrant families: importance of exploring beliefs about language acquisition, being more explicit about the child's language comprehension and setting receptive language goals and the need to revisit developmental milestones in relation to their child's ability often. • SLTs should provide likely explanations for delays as misconceptions may impact on involvement in intervention.
Sommers, Fragapane& Schmock (1994)	To assess a) significant changes in the attitudes and perceptions of mothers of young children who are receiving speech-language therapy; and b) To compare changes in these attitudes and perceptions with university supervisor's ratings of children's overall communication skills and speech intelligibility	• 17 mothers and their young children (2; 0 to 5; 8) with speech and language difficulties (all children had a combination of both to varying degrees) • Variety of socio-economic backgrounds and were all monolingual English speakers	• Children were enrolled in a 15-week SLT programme. • Mothers observed sessions via a one-way mirror. • Parent questionnaire about their attitudes and perceptions before and after SLT • Supervisors asked to rate each child's speech and communication skills using magnitude-estimate rating scales at the same intervals	• Total communication ranking, articulation ranking and mothers' aspirations for their child's reading and writing skills differed significantly. • Mothers' perceptions regarding their own participation in intervention, their children's' attitudes towards SLT, perceptions regarding fathers' attitudes toward SLT as well as mothers' perceptions regarding their role in decision-making were not significant. • Positive changes in mothers' aspirations were related to positive changes in supervisor ratings of total communication and changes in perceptions about involvement in decision making acted as a predictor of mothers' aspirations for their children as well as the child's attitudes towards SLT.	• Evidence that maternal attitudes and aspirations for their child may occur without direct counselling, indicating that intervention that includes direct counselling may be even more beneficial • Improvements in child communication skills may help to improve mothers' perceptions about their child's later reading and writing skills. • Involvement in therapy may serve to improve perceptions regarding their child's academic achievement.

Following the results from Table 2, the need for SLTs to consider the cultural and linguistic background of the families they serve becomes apparent. The therapy practices generally used with families from one cultural and linguistic group may not necessarily be suitable for practice with a different group (Kummerer Lopez-Reyna, 2006; Kummerer et al., 2007). Caregivers may enter the therapy programme with preconceived beliefs and perceptions that need to be comprehensively reviewed and used to make adaptations to the therapy process (Marshall et al., 2007; Marshall et al., 2017). In addition, it may be necessary to provide explanations regarding the potential causes of the child's communication difficulties, the child's current communication skills, and the therapy process as well as the role of both the caregiver and SLT (Brady et al., 2006; Kummerer & Lopez-Reyna, 2006; Kummerer et al., 2007). Furthermore, considering caregiver self-efficacy may be important in that it may impact on caregiver involvement in the therapy process (Harty et al., 2006).

In addition to considering a family's broad perceptions regarding language development and their role in intervention, it is also important to address their perceptions regarding their child's specific language abilities. The research suggests that parents' perceptions regarding their child's language development may assist SLTs in providing more tailored intervention to the families they serve. An important finding is that parents of a child with little or no expressive language may hold more negative perceptions regarding their child's language development, language therapy and their own perceived roles in the process. Thus, it may necessary to address these perceptions directly (Brady et al., 2006; Romski et al., 2011). This is especially true when you consider the close relationship between caregiver perceptions and levels of stress (Smith et al., 2011). From this perspective, caregivers' understanding, and perceptions of the language development and intervention process are important if family models of intervention are to be successful.

Within South Africa, there is no prevalence data on individuals with communication disabilities (Kathard & Pillay, 2013), however, what is known is that most SLTs speak either English or Afrikaans, with very few speaking an African language (Kathard & Pillay, 2013). Therefore, a cultural and linguistic mismatch between SLT and client is commonly reported (Penn, Mupawose, & Stein, 2009). Another challenge to SLT service delivery in low-and-middle-income contexts such as South Africa is that intensive, frequent therapy is not

always possible as a result of SLT to population ratios, high prevalence of disability (Kathard & Pillay, 2013), time away from home and cost of transport to the facility where rehabilitation services are accessed, etc. (Bunning, Gona, Newton, & Hartley, 2014). These factors can also result in children spending a longer duration of time in therapy. Clearly, there is a dearth of research addressing the perceptions of caregivers from diverse backgrounds regarding their child's language development and language therapy. Thus, there is a critical need for research to address these perceptions so that SLTs may be better equipped to serve the culturally and linguistically diverse population within the realities of the local context.

1.4. The Contribution of Caregivers in Intervention Planning and Monitoring

Romski and Sevcik (1996), in their early work on the perceptions of parents of children with language difficulties, found that the most prevalent concerns expressed by parents included concerns regarding their child's language development; the way in which their child used language; and factors that influenced their child's language development, including stresses experienced by them related to their child's language development. These researchers subsequently developed the Parent Perception of Language Development (PPOLD) measure, which primarily investigates two aspects of parental perceptions: how successful parents feel they are in helping their child to develop language and how they perceive the level of difficulty that their child experiences with language (Romski et al., 2011). A factor analysis of the statements revealed that most of the statements fell into two categories, namely "success" and "difficulty", which describe facilitators and barriers regarding a child's communication respectively. Romski et al. (2011) subsequently made use of the PPOLD to measure parents' perceptions of the impact of a parent-coached language intervention programme over three months. Although the results did not reach a statistically significant level, their findings indicated that parents were more positive about their child's communication following language intervention. In addition, the authors stated that the PPOLD is useful to strengthen therapists' understanding of parents' views of their child's language skills and can assist researchers and therapists in understanding the relationship between these perceptions and outcomes of intervention.

The PPOLD measure was later culturally and linguistically adapted to form the South African Caregiver Perception of Language Development (SA-CPOLD), for use with four linguistic groups (Afrikaans, isiZulu, Setswana and South African English) (Romski et al., 2018). The tool was intended for use with primary caregivers, including, but not limited to, parents, and includes seven statements that pertain to the success and five to the difficulty experienced by the child and caregiver with regard to the child's language. An additional two statements relate to caregiver beliefs about the cause and outcome of the child's language difficulty. The perception measure was adapted using the guidelines set out by Bornman, Romski, Sevcik, Romski and Pae (2010) for test translation in the South African context. The translation included adapting the wording of the assessment in order to ensure that the meaning of the questions was preserved in the translation process. For example, in the isiZulu and Setswana versions of the questionnaire, the word "communicate" had to be broken into two separate statements to encompass both receptive and expressive aspects of communication as there is no direct equivalent to the English word "communication" in these languages. In addition, technical terminology that is not commonly used in some African cultures was replaced with more culturally appropriate vocabulary. For example, the PPOLD statement: "My child's language development is about where I expect it to be given his/her level of motor/cognitive development." was changed to "My child is slow to talk because he/she is slow with everything, like walking and learning."

When the SA-CPOLD was implemented, the results suggested that it can assist South African therapists to gain insight into the views caregivers hold about their child's communication development as well as tap their perceptions about the role they play in the language development process (Romski et al., 2018). The authors suggested that the measure could be used as part of a comprehensive assessment protocol in order to obtain an understanding of how caregivers feel about their child's language development. Furthermore, the authors proposed that it might also be useful for planning intervention aims and for monitoring progress (Romski et al., 2018).

Research projects such as the one conducted by Romski et al. (2018) are important to gain insight into the perceptions of caregivers regarding their child's language development in the African context. This is particularly important because although there has been well-

documented success in the literature regarding the training of caregivers as interventionists, much of the research in the field of speech-language therapy and language development comes from Western, English-speaking cultures in developed contexts (Kathard, Naude, Pillay & Ross, 2007; Samuels, Slemming & Balton, 2012). Although there is a dearth of research on the perceptions of caregivers who speak indigenous African languages regarding their child's language development, the research in the field of child development suggests that culture, and the daily routines embedded therein, have an important impact on a child's development (Weisner, 2002). In a study of caregivers in Sub-Saharan Africa, researchers found that it was common for family members to provide intentional practice and teaching of motor skills such as sitting and walking and that caregivers regarded vigorous massage as an important part of ensuring physical health and motor development in their infants (Super & Harkness, 2009), both of which are not common practices in Western cultures.

Similarly, in a South African study that examined activity settings within a low-income urban African context, the authors found that the activities and experiences that young children are exposed to are largely dependent on beliefs, resources, values and practices of families (Balton, Uys & Alant, 2019). For example, the participants in the study indicated that that their children frequently took part in play activities, including pretend games, which were perceived as important by caregivers. When providing descriptions of these pretend activities, participants reported that children often pretended to be mothers by tying dolls on their backs or pretended to be taxi drivers (Balton et al., 2019), which are scenarios to which these children are frequently exposed. Another example from the Balton et al. (2019) study was how outside play was limited by concerns of caregivers regarding the safety of parks and other community spaces. In keeping with the importance of caregiver perceptions to child development, Samuels et al. (2012) encourage South African SLTs to incorporate family priorities and perspectives into intervention to ensure that intervention aims to promote participation in the child's daily life and to maintain family involvement and interest in intervention. In order to be able to do this successfully, research to address the perceptions of caregivers from different cultural and linguistic groups is required.

The available literature on communication intervention for young children provides ample support for the involvement of caregivers in their child's language intervention (Kaiser & Roberts, 2011; Roberts & Kaiser, 2011). In addition, research has demonstrated that caregivers' perceptions and understanding of the role that they play in their child's language development are important to their willingness to use taught language intervention strategies and, ultimately, to child intervention outcomes (Kaiser & Hancock, 2003; Leffel & Suskind, 2013). Importantly, there is evidence to suggest that the severity of a child's language difficulties may impact on these perceptions (Brady et al., 2006; Romski et al., 2011). The challenge, however, is that there is a paucity of research with regard to how caregivers from non-Western, non-English-speaking backgrounds perceive their child's language development and understand the role that they play in their child's language development. Understanding these perceptions as well as the role of factors that may influence these perceptions is important so that intervention may be tailored more specifically to caregivers who are from an isiXhosa cultural and linguistic background.

The primary purpose of this study is therefore to investigate the perceptions of isiXhosa-speaking caregivers of children who receive SLT services in the Eastern Cape Province of South Africa regarding their child's language development. This will be done by describing caregivers' perceptions regarding their child's language development across three expressive language ability groups (i.e. not speaking; speaking in single words and phrases; and speaking in sentences) in order to describe whether expressive language level has an impact on these perceptions, and by focusing on perceptions related to success and difficulty factors regarding their child's language development, as well as highlighting whether differences in caregiver perceptions exist on the basis of duration and frequency of speech-language therapy and child age.

2. METHODOLOGY

2.1 Aims

2.1.1 Main aim

The main aim of the study was to describe and compare the perceptions of isiXhosa-speaking caregivers of young children receiving speech-language therapy, regarding their child's language development and their role in this process. The children were categorised into three groups according to their expressive language abilities in order to determine whether child expressive language skills impact on the perceptions of caregivers.

2.1.2 Sub-aims

The sub-aims of the study are:

i. to describe child and caregiver characteristics across three expressive language groups (namely, not speaking, speaking in single words and phrases, speaking in sentences);

ii. to compare caregivers' perceptions regarding their child's language development across the three expressive language groups in order to describe whether child expressive language level has an impact on these perceptions;

iii. to describe and compare caregivers' perceptions in terms of factors that relate to success regarding their child's language development across three expressive language groups;

iv. to describe and compare caregivers' perceptions in terms of factors that relate to difficulty regarding their child's language development across three expressive language groups; and

v. to describe whether differences in caregiver perceptions exist on the basis of duration and frequency of speech-language therapy and the child's age to determine whether these factors impact on caregivers' perceptions of their child's language development.

2.2 Research Design and Phases

This study used a quantitative, comparative, non-experimental survey design as it aligned with the aims to describe the perceptions of the participants, by use of numeric classification, and without manipulation of the variables (McMillan & Schumacher, 2013). Subsequently, it draws comparisons based on predetermined variables (namely, child expressive language ability, duration and frequency of speech-language therapy and child age). The use of this design did not allow the researcher to draw conclusions regarding cause and effect of the phenomena, but did allow for insight to be gained into the presence or absence of group differences and to gain a better understanding of these particular caregivers' perceptions (McMillian & Schumacher, 2013). This design thus allows for a description and comparison of the perceptions of the participants regarding their child's language development, but did not permit the researcher to gain insight into the complexity of the phenomenon, such as the understanding of the reasons for the responses provided (Leedy & Ormrod, 2014). In addition, data was gathered in a face-to-face manner in a structured interview format, which limited the sample size and thus generalisability of the results (Leedy & Ormrod, 2014), but was beneficial in answering the research question and relevant to the population of interest for several reasons. It allowed the researcher to build rapport with the participants and allowed potential difficulties, such as limited literacy skills and unfamiliarity with print, to be addressed. It also allowed for thorough investigation of the perceptions of the participants and how these perceptions were related to objectively measured child characteristics.

The research was conducted in two phases, as outlined in Table 3. In Phase 1, the data collection materials were adapted and translated and the pilot study was conducted. It aimed to identify potential challenges with the following: (a) the recruitment procedure, (b) gaining informed participant consent and child assent, (c) data collection materials, (d) data-collection procedures, (e) timeframe, and (f) training of research assistants. Finally, the participants were recruited. The main study (Phase 2) involved initial contact and a brief screening, data collection and subsequent analysis.

Table 3

Two research phases

Phase 1: Material adaptation and translation, pilot study and recruitment	**1.1. Material adaptation and translation**	**1.2. Pilot study**	**1.3. Participant recruitment and selection**
	The questionnaire was adapted from the SA-CPOLD questionnaire (Romski et al., 2018) and then further refined based on feedback from the expert panel. The relevant data collection materials were translated using a blind-back translation method (Bornman et al., 2010).	The pilot study was conducted in order to identify potential problems that may negatively impact the main study. The aims included identification of challenges in the following: a) the recruitment procedure; b) participant consent and child assent; c) data collection materials; d) data-collection procedures; e) timeframe; and f) training the research assistants.	Potential participants were recruited via the SLTs employed at the elected hospital.
Phase 2: Main study	**2.1. Initial contact and screening**	**2.2. Data collection**	**2.3. Data analysis**
	The potential participants were contacted, and a brief screener was conducted to ensure that each participant met all the inclusion criteria for participation in the study.	Data collection was conducted in a quiet room at the hospital where the children receive speech-language therapy or in the participants' homes in cases where caregivers found it difficult to travel to the hospital.	Data was analysed using descriptive and inferential statistics.

2.3 Pilot Study

2.3.1. Objectives

The purpose of a pilot study is to inform the design of the main study. It allows the researcher to "*test the performance characteristics and capabilities of study designs, measures, procedures, recruitment criteria and operational strategies that are under consideration for use in a subsequent, often larger study*" (Moore, Carter, Nietert, & Stewart, 2011, p.332). The aim of this pilot study was to determine the feasibility of the recruitment method and the comprehension of the data collection materials and procedures. In addition, the pilot study also aimed to assist the researcher in determining a timeframe estimate for the data collection procedure. Finally, it provided an opportunity to train the research assistant for the purpose of the main study.

2.3.2 Participants

Participants for the pilot study were recruited using the same criteria for the main study. However, in order to avoid the risk of having to reduce the sample size for the main study, caregivers included in the pilot study were not eligible for participation in the main study as they were on the researcher's own caseload. Three caregivers, who had children receiving speech-language therapy at the hospital, consented and were contacted. The participants were all mothers, aged 40, 44 and 32 years old respectively. Details regarding their children are provided in Table 4.

Table 4

Pilot study child participant descriptions (correlating with their respective caregiver participant number above)

	Child 1	**Child 2**	**Child 3**
Age (in months)	69 months	63 months	47 months
Gender	M	M	M
Diagnosis	None	None	ASD
Duration of time in therapy (in months)	11 months	2 months	2 months
Frequency of therapy sessions	Twice/month	Twice/month	Twice/month
Raw score on the MSEL expressive language subscale	46	35	4
Age equivalent on expressive language subscale (in months)	60	40	3
Raw score on the MSEL receptive language subscale	36	36	13
Age equivalent (in months)	42 months	42 months	13 months
Number of intelligible words	38	136	0
MLUW	2.05	2	0
Expressive language group	3	3	1

All caregivers had children who were receiving therapy related to language difficulties and who spoke isiXhosa as their first language. This was not considered to be a threat to the validity of the pilot study as a pilot study does not aim to test any hypotheses, but rather aims to identify practical factors that may hinder the completion of the larger project (Conn, Algase, Rawl, Zerwic, & Wysman, 2010).

2.3.3 Aims, materials, procedures, results and recommendations

Details regarding the aims, materials, procedures, results and recommendations of the pilot study are provided in Table 5. The materials and procedures are only referred to briefly in the table, as these will be the same as those used for the main study.

Table 5

Pilot study aims, materials, procedures, results and recommendations

Aim	Materials	Procedures	Results	Recommendations
1. To determine the feasibility of the participant inclusion criteria	The SLT referral letter	The researcher identified caregivers and their children who met the inclusion criteria for the study and asked them whether they would be willing to participate in the study.	All three caregivers who were approached agreed to participate in the study. The pilot participants and their children all met the inclusion criteria and were able to complete all procedures required.	Maintain the SLT referral letter and method of participant selection for the main study.
2. To determine the usability and adequacy of the SLT referral letter	The SLT referral letter	The SLT referral letter was completed in order to ensure that potential participants met the inclusion criteria.	The SLT referral letter was simple to complete and provided all the required information.	Maintain for the main study.
3. To determine the response rate from the potential participants	The SLT referral letter	Potential participants were contracted and asked whether they were prepared to participate in the study.	All three caregivers who were approached agreed to participate in the pilot study.	Maintain for the main study.
4. To determine the comprehension of the participant consent letter and reply slip	The participant consent letter and reply slip	The researcher read the consent letter and reply slip to the participants and asked whether it was easy to understand.	All pilot study participants reported that the consent letter and reply slip were simple to understand and complete.	Maintain the participant consent letter and reply slip in its current form for the main study.
5. To evaluate the feasibility of the child assent protocol	The child assent form and paint	The children were asked to listen while the researcher explained her expectations with the use of visuals to support spoken words. Thereafter the children were asked to put a handprint on the form if they agreed to participate.	The child assent protocol was simple to conduct with the three children who participated in the pilot study.	Maintain the assent procedure in this manner for the main study.
6. To determine the comprehension of the	The participant biographical questionnaire	The biographical questionnaire was	All pilot participants reported that the biographical questionnaire	Conduct biographical questionnaire as a structured interview in the main study.

Aim	Materials	Procedures	Results	Recommendations
participant biographical questionnaire		conducted in a structured interview format.	was simple to complete. All reported that they preferred for it to be conducted in a structured interview format.	
7. To determine the comprehension of the wording used for the SA-CPOLD questionnaire	The SA-CPOLD questionnaire	The researcher read the statements on the questionnaire and asked whether the participants agreed or disagreed with it. Thereafter, the participants were asked to describe to what extent they agreed or disagreed with the statement and to indicate their response on the Talking Mat™ (Murphy & Boa, 2012).	The pilot participants all reported that the wording of the SA-CPOLD questionnaire was simple to understand. It was also evident that they were not hesitant or indecisive in providing their answers, showing that they understood what was expected of them.	Maintain structured interview format for completion of the SA-CPOLD questionnaire for main study.
8. To determine the adequacy of the 4-point visual scale and the comprehension of the symbols selected for the visual scale for the SA-CPOLD questionnaire	The SA-CPOLD questionnaire in Talking Mat™ (Murphy & Boa, 2012) format	The researcher read the statements on the questionnaire and asked whether the participants agreed or disagreed with it. Thereafter, the participants were asked to describe to what extent they agreed or disagreed with the statement and to indicate their response on the Talking Mat™ (Murphy Boa, 2012).	One of the pilot participants reported that the symbols used for the visual scale was confusing and that she would have preferred the option of a midpoint on the visual scale. The other two reported that the visual scale was easy to understand and provided adequate response options.	The visual scale needs to be explained more clearly prior to administration of the training items. Time needs to be taken to make the meanings of the symbols explicit and relatable so that confusion during the administration of the items is minimised. Based on the feedback from the pilot participants, the visual scale was changed to a five-point scale to allow for a neutral opinion to be expressed. This decision to change the forced-choice scale was based on evidence to suggest that including a neutral point is appropriate when participants have sufficient knowledge of the

Aim	Materials	Procedures	Results	Recommendations
				content (Chyung, Roberts, Swanson, & Hankinson, 2017). Chyung et al. (2017) also raised concerns that forcing participants to make a choice may yield biased results. Moreover, pilot participants had clear perceptions to express and only requested a midpoint on items where they truly had a neutral opinion.
9. To determine the comprehension of the graphic symbols used to represent the statements on the SA-CPOLD questionnaire	The SA-CPOLD questionnaire in Talking Mat™ (Murphy & Boa, 2012) format	The researcher read the statements on the questionnaire and asked whether the participants agreed or disagreed with it. Thereafter, the participants were asked to describe to what extent they agreed or disagreed with the statement and to indicate their response on the Talking Mat™ (Murphy & Boa, 2012).	The pilot participants reported that the graphic symbols used to represent the statements on the SA-CPOLD were suitable and comprehendible. It also acted as a reminder to stay focused on the specific question at hand.	Maintain the selected graphic symbols for representation of the SA-CPOLD statements for main study, but include a symbol to represent the neutral midpoint as per the above findings.
10. To determine the appropriateness of the three play items selected for use in the caregiver- child interaction	The three-item play set, including blocks, a ball and an illustrated children's book that is available in isiXhosa and English	The researcher asked the participants to interact with their child for 10 minutes using the items provided. They were asked to do this in a manner that was typical of how they would interact with their child at home.	The three items used in the caregiver-child interactions were suitable and engaging for the two children without a neurodevelopmental diagnosis, however the child with ASD was not engaged in the items chosen.	Change the standard ball to one that makes a sound when thrown in order to be more engaging to children with ASD or for children who may require higher levels of sensory information to maintain attention to a task.
11. To determine the comprehension and use of instructions provided for the caregiver-child interactions	A script of uniform instructions	The researcher asked the participants to interact with their child for 10 minutes using the items provided.	All pilot participants reported that the instructions provided for the interaction were clear.	Maintain the scripted instructions for main study.

Aim	Materials	Procedures	Results	Recommendations
		They were asked to do this in a manner that they typically would in a natural setting. The interaction will then be video recorded.		
12. To determine the feasibility of using the MSEL assessment as part of the data collection protocol	The Receptive Language and Expressive Language subscales of the MSEL (Mullen, 1995) as well as an isiXhosa translation of the assessment .	The researcher assessed the child's receptive and expressive language skills using the MSEL assessment. The results were calculated and were used as one of the scores required to place the children into one of the three expressive language groups.	The two subscales of the MSEL were simple to administer and the results were aligned with the language sample collected in the caregiver-child interaction.	Include these two subscales of the MSEL for main study.
13. To determine the adequacy and optimal positioning of the video-recorder for recording the caregiver-child interaction	An Apple iPad (6th generation) 9.7'' Wi-Fi	The interaction was video-recorded from behind the child, but positioning was changed if the caregiver-child dyad chose to throw the ball to one another while standing.	The iPad was adequate – the audio and visual aspects of the recording were clear. It worked well to stand behind the caregiver and child so that the video recording did not distract the child from the interaction. The researcher occasionally had to change her position slightly in order to properly capture the interaction during the ball-throwing activity.	Maintain positioning of the iPad behind the caregiver-child dyad for use in video-recording the interaction for main study, but change position slightly to accommodate the ball-throwing activity.
14. To determine the feasibility and appropriateness of the proposed order of data-collection procedures	A checklist of the data collection procedure	The data collection procedure was administered in the proposed order.	The proposed order of procedures worked adequately, however, the video-recorded interaction provided the researcher with a clear indication of the child's language skills, enabling her to select an appropriate starting point	The order of the data collection was changed to the following: Child assent and caregiver consent completion, completion of the participant biographical questionnaire, caregiver-child interaction and MSEL receptive and expressive

Aim	Materials	Procedures	Results	Recommendations
			for the MSEL assessment, and aided the scoring of the MSEL. For example, item 17 on the expressive language subscale requires observation of self-initiated two-word phrases.	language subscale administration
15. To determine the length of time required for data collection	The participant consent letter, the child assent letter, participant biographical questionnaire, the MSEL (Mullen, 1995) and translation, the written version of the SA-CPOLD questionnaire (Romski et al., 2018) and Talking Mat™ (Murphy & Boa, 2012) In addition, the iPad and the three-item play set will also be required.	The researcher timed the entire data collection procedure for each participant, using the stopwatch function on an Apple iPhone 6.	The shortest pilot took 40 minutes (Participant 3) while the longest pilot took one hour (Participant 1).	It is recommended that at least one hour be allocated to collecting data from each participant.
16. To train the research assistant on the data collection procedure and expectations regarding appropriate conduct and translation guidelines	Copies of relevant data collection instruments	The research assistant was provided with verbal information regarding etiquette, guidelines for translation, expectations and data-collection procedures. In addition, she was present for the data collection of one of the pilot participants, which provided an opportunity to observe the procedure and gain experience in administering MSEL items.	The research assistant provided a gestural cue during the assessment of the child's language skills and made occasional comments regarding items used during the assessment and interaction.	Further training is required regarding expected conduct during the data collection procedure as well as further training and experience on the administration of standardised language assessments such as the MSEL.

2.4 Participants

2.4.1. Sampling and recruitment

Caregivers and their children were selected for participation in the main study using a purposive, non-probability sampling method. The sampling method was deemed appropriate for the study because the purpose is to gain insight into the perceptions of caregivers of children who meet specific criteria (Leedy & Ormrod, 2014). This ensured that the data collected is relevant to the specific group of interest in this study (McMillan & Schumacher, 2013). The sample size was chosen to adhere to what can be reasonably achieved within the timeframe, but which will still allow inferential statistical analyses of the data to take place and accurate results to be yielded (Hill, 1998). A disadvantage of this method, however, is that it does not ensure that the sample is representative of the population of interest (Leedy & Ormrod, 2014).

Once the Ethics Committee of the Humanities Faculty at the University of Pretoria (Appendix A), the Eastern Cape Department of Health (Appendix B) and the hospital manager (Appendix C) granted ethics permission, the researcher met with the SLTs employed at the elected hospital in order to provide an explanation of the aim of the study and to request their assistance in the recruitment process. The consent letter and reply slip was provided (Appendix D). All four SLTs approached provided consent and were provided with hard copies of the SLT referral letter (Appendix E) to allow them to provide potential participant information and contact numbers to the researcher. The 35 potential participants were contacted telephonically in order to determine their interest in the study as well as to confirm the details provided by the referring SLT. Of these, 30 met the criteria and consented to participate. A mutually suitable date and time for data collection was set.

The participant selection criteria are presented in Table 6.

Table 6

Participant selection criteria

Criterion	Theoretical justification	Measure used
1. All participants should be caregivers of children who are between the chronological ages of 30 and 72 months who are currently receiving speech-language therapy.	This study focuses on young children as parent involvement has received particular attention in the early intervention literature (Roberts & Kaiser, 2011). In addition, children in South Africa who access rehabilitation services from the public sector typically receive therapy at their local hospital up to the age of six and are thereafter referred to the Department of Education in order to access services.	Biographical questionnaire
2. All participants should speak isiXhosa as their first language. *(Note: The decision to use first language rather than home language was due to the possibility that the language spoken at home may be different to the first language of the family for various reasons).*	IsiXhosa is the second most commonly spoken first language in South Africa (Statistics South Africa, 2011). In addition, Romski et al. (2018) trialed the SA-CPOLD measure for use with four different linguistic groups in South Africa, however, isiXhosa was not included in their study. These authors recommended that future research focus on exploring its use with isiXhosa-speaking individuals as its appropriateness to one of the other Nguni languages, namely isiZulu, was described (Romski et al., 2018). In addition, it is necessary for research to include participants from varying cultural and linguistic backgrounds in order to contribute to transformation within the speech-language therapy profession in South Africa (Khoza-Shangase & Mophosho, 2018).	Biographical questionnaire
3. All participants should be caregivers of children who require therapy for varying degrees of language difficulties or delays. Children who present with speech difficulties only (e.g. articulation/phonology difficulties) and fluency disorders will be excluded.	The purpose of the original PPOLD measure, the adapted SA-CPOLD and the current research project is to obtain information regarding caregivers' perceptions of language development (Romski et al., 2011; Romski et al., 2018) and not difficulties related to speech only.	Completed Therapist Referral Form from referring SLT

2.4.2. Participant description

The participants were 30 caregivers of young children who receive speech-language therapy at a public hospital in the Eastern Cape for difficulties pertaining to language development. Descriptions of the participants are provided in Table 7, while their children's biographical detail is provided in Table 8.

Table 7

Participant descriptions

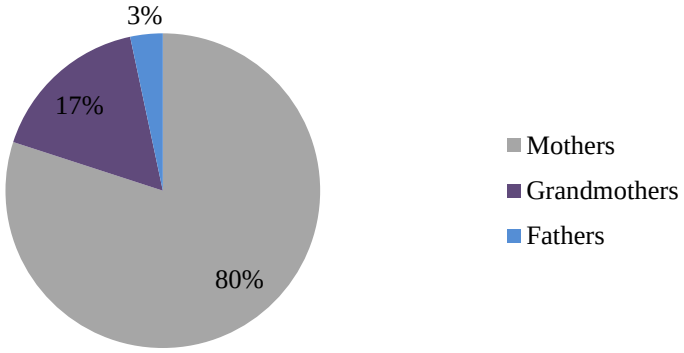
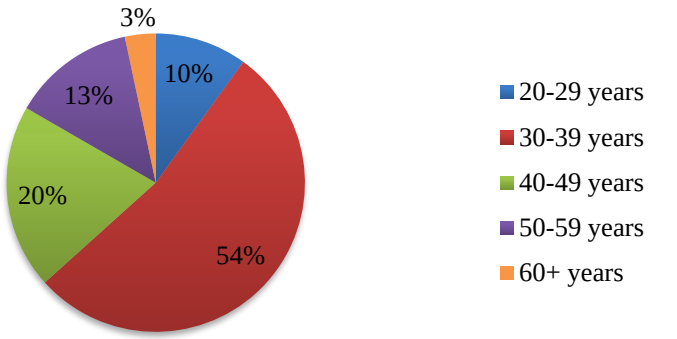
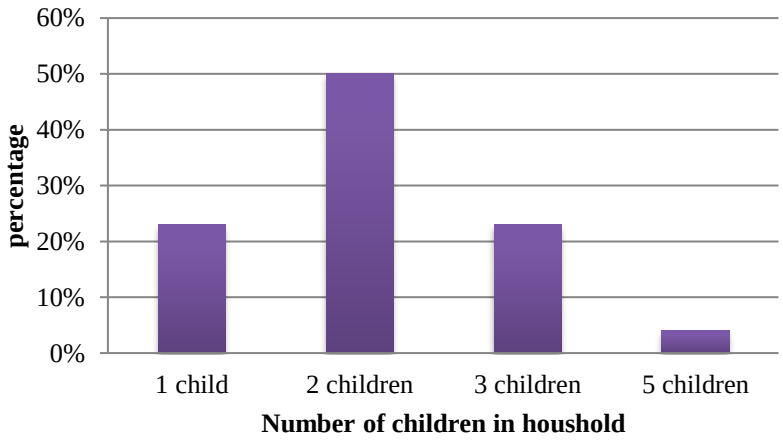
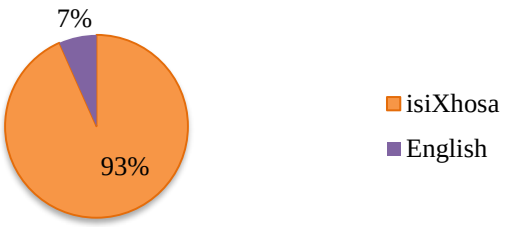
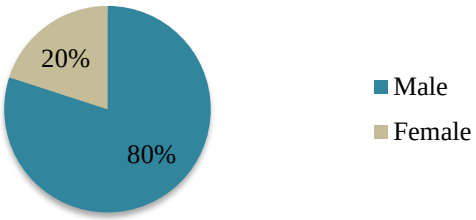
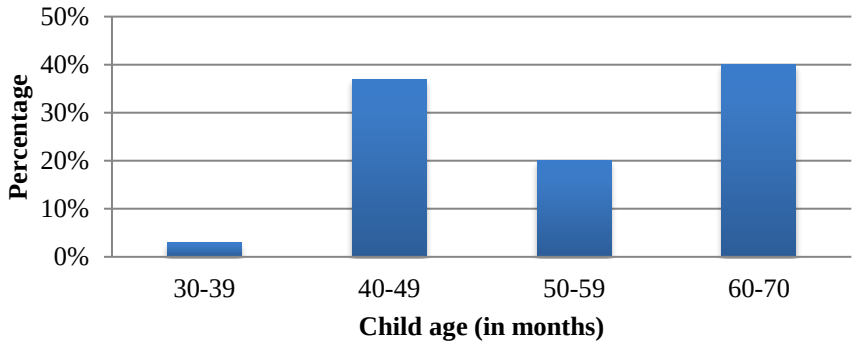
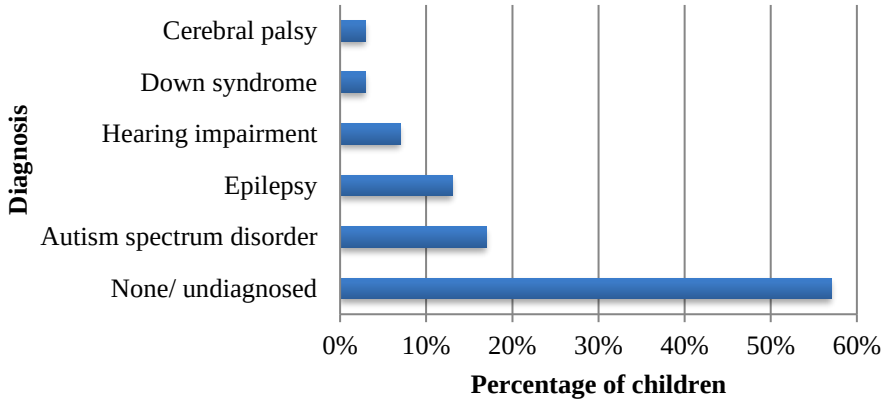
Description	Data (n=30)
Relationship to child Most of the caregivers (n=24) were mothers, five were grandmothers and one was a father.	
Caregiver age The participants were between the ages of 22 and 66 years (*M*=38.6*; SD:* 9.7 years*)*. Slightly more than half (54%) of the participants were between the ages of 30 and 39 years, while 20% were between 40 and 49 years and 13% were between 50 and 59 years. Those who were 20 to 29 years and over 60 years comprised 10% and 3% respectively.	
Number of children in household The mean number of children that the caregivers were responsible for was 2.1 (*SD*=0.89*)*. Most of the caregivers reported that they were responsible for two children (50%). An equal number respectively had one (23%) or three (23%) and one caregiver had five children (4%). For many of the caregivers (60%), the child with language difficulties was their youngest child, followed by their only child (23%) and their oldest child (10%) and those for whom the child fell in the middle (7%).	

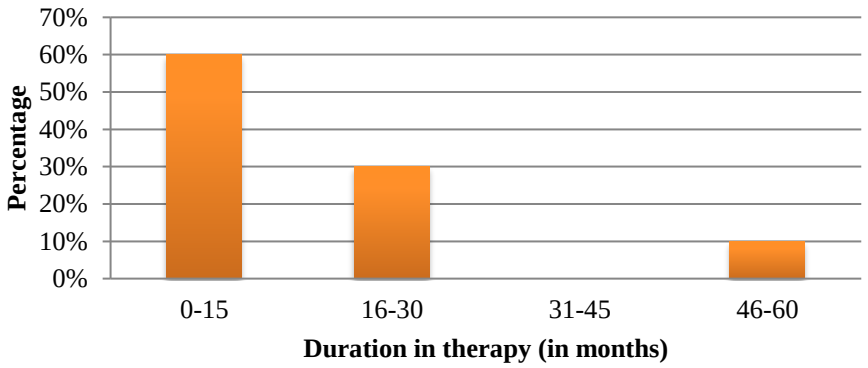
Table 8

Child biographical detail

Description	Data (n=30)
First language 93% of children spoke isiXhosa as their first language and two (7%) spoke English as their first language. Both the children who were reported to speak English as their first language also spoke isiXhosa.	
Sex Of the children, 24 were male (80%) and six were female (20%). This is consistent with literature, which reports that more boys experience language difficulties than girls; however, the ratio in the present study (4:1) is slightly higher than what is typically reported (Choudhury, & Benasich, 2003).	
Children's age The children were between the ages of 30 and 70 months (*M*=54.9, *SD*= 11.1 months). Many of the children were either between 60 and 70 months (40%) or between 40 and 49 months (37%). The remainder were between 50 and 59 months (20%) or 30 and 39 months (3%).	
Diagnosis More than half of the children (57%) had either not received a diagnosis yet or the diagnosis was unknown. The remaining diagnosis included a range of neuro-developmental disorders (cerebral palsy, autism spectrum disorders, Down syndrome, epilepsy) and sensory disorders (hearing). These are well-known diagnoses that are typically associated with language delays (Paul & Norbury, 2012).	

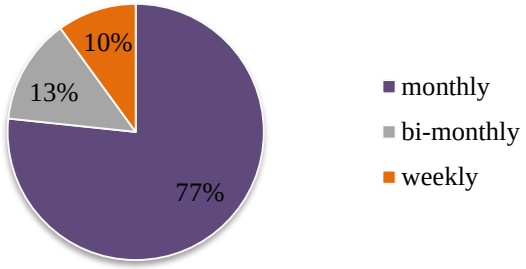
Length of stay in therapy

The children had been attending SLT for between one and 60 months with a mean duration of 15.5 months (*SD*=16,8 months). Many of the children (60%) had been attending for less than 15 months, while 30% had been attending for between 16 and 30 months. Only 3% has been attending for over 46 months.



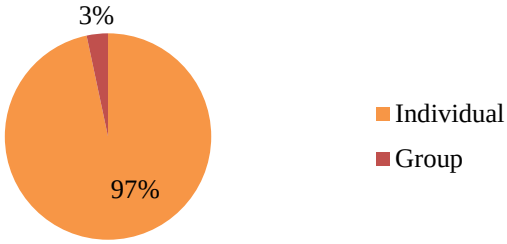
Frequency of therapy

Most children (n=23) were attending therapy once a month, four were attending twice a month and the remaining three children attended weekly therapy.



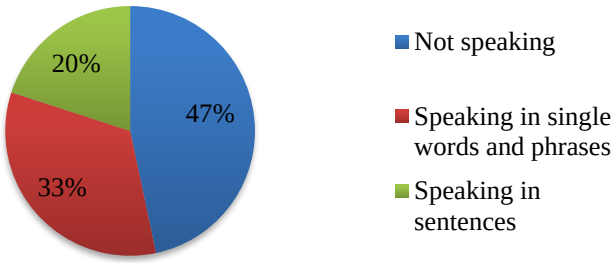
Type of therapy

All of the children attended individual SLT sessions with the exception of one child who attended group SLT sessions.



Expressive language abilities

Most of the children were classified as *not speaking* (47%), followed by those *speaking in single words and phrases* (33%) and those *speaking in sentences* (20%).



2.5 Materials and Equipment

Materials related to ethics will first be described (Section 2.5.1 to 2.5.4), before the instruments and equipment related to data collection are discussed (Section 2.5.5 to 2.5.10). Ethics permission was obtained from the Ethics Committee of the Faculty of Humanities at the University of Pretoria (Appendix A) and the Department of Health in the Eastern Cape (Appendix B) before commencing with the study. Thereafter, the process of obtaining ethics permission included a number of different steps, as outlined below.

2.5.1. The Hospital Manager Consent Letter and reply slip

The Hospital Manager Consent Letter and reply slip (Appendix C) provided the managers of the elected hospitals with information regarding the rationale for the study and what was expected from the hospital (especially the SLTs) and the participants. It detailed how ethical standards were upheld, including informed consent, child assent, right to withdraw, and confidentiality. It also provided information about data storage as well as informed the hospital manager of possible risks and benefits of the research.

2.5.2. Speech-Language Therapist Consent Letter and reply slip

The Speech-Language Therapist Consent Letter and reply slip (Appendix D) provided SLTs at the elected hospitals with information regarding the purpose of the study, what was expected of them in terms of recruitment of participants, their rights as pertaining to the study, as well as information about access to the findings and the risks and benefits involved in the study.

After the SLTs had provided consent to assist in the recruitment of participants, the SLT Referral letter (Appendix E) provided SLTs with a checklist of inclusion criteria required for participation in the study. The letter also required the SLTs to provide the researcher with the name and contact details of the potential participants.

2.5.3. The Participant Consent Letter and reply slip

The Participant Consent Letter and reply slip (Appendix F1) provided potential participants with information regarding the purpose of the study, what was expected of them

should they choose to participate in the study, their rights pertaining to the study, as well as information about access to the findings and the risks and benefits involved in participation in the research. The consent letter and reply slip were rigorously translated into isiXhosa (Appendix F2) and the information was read to the participants in the language of their choice (isiXhosa or English).

2.5.4. The Child Assent Letter

The Child Assent Letter and reply slip was completed in either English (Appendix G1) or isiXhosa (Appendix G2). It provided the children with a simple outline of who the researcher is and what is expected of them. The reply slip included a section where the child could press down their handprint using paint in order to indicate that assent had been provided.

2.5.5. The Participant Biographical Questionnaire

The Participant Biographical Questionnaire was also completed in either English (Appendix H1) or isiXhosa (Appendix H2). It included questions regarding the names, dates of birth and first language/s of the participant and their child, the medical diagnosis of the child (if any), details about the number of children in the household and the birth order of the child receiving speech-language therapy, as well as questions regarding the frequency and duration of therapy. Finally, the caregiver was asked to indicate whether their child receives therapy individually or in a group. Table 9 provides details of questions included.

Table 9

Development of the participant biographical questionnaire

Question number	Aspect	Type of question	Reason for inclusion	Theoretical justification
1.	First language (participant)	Open-ended	To determine first language of the caregivers	The SA-CPOLD has been used with four linguistic groups in South Africa (Romski et al., 2018), but not with isiXhosa-speaking individuals. These authors recommended that future research should focus on exploring its use with isiXhosa-speaking individuals as its appropriateness to one of the other Nguni languages, namely isiZulu, had already been described (Romski et al., 2018).
2.	First language (child)	Open-ended	To determine the first language of the child	
3.	Age (participant)	Open-ended	To determine the age of the participant	Balton (2004) describes how caregivers in South Africa may often be someone other than the child's parent. This may include older relatives such as grandmothers. It is important to be able to describe the age of the caregivers in order to be able to determine whether this may have an impact on perceptions.
4.	Age (child)	Open-ended	To determine the age of the child	This study focuses on young children because parent involvement has received particular attention in the early intervention literature (Roberts & Kaiser, 2011). In addition, children in South Africa who access rehabilitation services from the public sector typically receive therapy at their local hospital up to the age of six and are referred to the Department of Education thereafter in order to access services. Once in the education system, caregivers typically no longer accompany their child to therapy as they receive this service at the school.
5.	Medical diagnosis (child)	Open-ended	To determine the medical diagnosis (if any) of the child	The SA-CPOLD was previously used to investigate the perceptions of caregivers with a range of neurodevelopmental disorders (Romski et al., 2018). In addition, Smith, Romski, Sevcik, Adamson and Barker (2014) suggested that child diagnosis (in this case, Down syndrome) may have had an impact on parents' perceptions. In addition, research on caregivers' perceptions regarding their child's language development has focused on a range of children with different diagnoses (e.g. Brady et al., 2006). It is also important to determine whether perceptions differ on the basis of child diagnosis.
6.	Relationship between caregiver and child	Open-ended	To determine the relationship between the caregiver and the child	Balton (2004) describes how caregivers in South Africa may often be someone other than the child's parent. In addition, although the literature search on caregiver perceptions of their child's language development did not yield studies comparing mothers' and fathers' perceptions, there is literature to suggest that mothers and fathers of young children with disabilities may differ on perceptions of stress (Gerstein, Crnic, Blacher, & Baker, 2009). Therefore, it is important to be able to determine whether caregiver-child relationship impacts

				perceptions. This question will also provide information on sex of the participant, a factor that may impact on people's responses to certain types of questions (Leedy & Ormrod, 2014).
7.	Duration of speech-language therapy	Open-ended	To determine the duration of time the child has been attending Speech-language therapy	A number of studies (e.g. Romski et al., 2011; Smith et al., 2011) have compared caregivers' perception regarding their child's language development before and after involvement in a language therapy programme. Although the current study does not look directly at changes in perceptions pre- and post-intervention, it is useful to understand whether perceptions are related to duration of time the child has spent in speech-language therapy.
8.	Birth order of child	Closed-ended	To determine the birth order of the child	Concerns have been raised in the literature that children with disabilities require more time from caregivers, which may place strain on family dynamics (Higgins, Bailey, & Pearce, 2005). Therefore, it is important to be able to describe this aspect of the home situations of the caregivers as it may provide some insight into reasons for the perceptions they have.
9.	Number of children in the household	Closed-ended	To determine the number of children in the household	
10.	Frequency of therapy	Closed- ended	To determine the frequency of the speech-language therapy received	The literature that compared parent perceptions before and after language therapy was conducted primarily in developed contexts and involved intensive therapy programmes that provide therapy to children on an individual basis (e.g. Romski et al., 2011). The reality in South Africa is that with the high SLT: South African population ratio (Kathard, & Pillay, 2013) and other social challenges, children are not able to receive SLT services as often as children in developed contexts and SLT departments servicing the public sector may choose to deliver therapy in a group setting to maximise human resources. It is therefore important to determine whether frequency of speech-language therapy and/or receiving therapy in a group rather than individually may impact on primary perceptions of their child's language skills.
11.	Individual or group therapy	Closed-ended	To determine whether the child receives therapy individually or in a group	The literature that compared parent perceptions before and after language therapy was conducted primarily in developed contexts and involved intensive therapy programmes that provide therapy to children on an individual basis (e.g. Romski et al., 2011). The high SLT: South African population ratio (Kathard & Pillay, 2013) and other social challenges result in children receiving SLT services less frequently than children in high-income countries. Furthermore, SLT departments servicing the public sector may choose to deliver therapy in a group setting to maximise human resources. It is therefore important to determine whether frequency of SLT and/or receiving therapy in a group rather than individually may impact on primary perceptions of their child's language skills.

2.5.6. The South African Perception of Language Development (SA-CPOLD)

The SA-CPOLD questionnaire (Appendix I) includes a series of 16 statements pertaining to a child's language development, and the role that caregivers play in their child's communication development. The questionnaire requires participants to respond to each statement according to a five-point Likert scale (1=strongly disagree; 2= disagree; 3= neutral/ neither agree nor disagree; 4= agree 5= strongly agree), which was used following the results from the pilot study (see Table 5). As described by Romski et al. (2018), the statements can be separated into 10 statements that focus on "success" regarding the child's language skills and the caregiver's role in his/her language development (questions 1, 2, 4, 6, 8a, 8b, 10a, 10b, 13a and 13b), four that focus on "difficulty" relating to child language difficulty (questions 3, 5, 7 and 9) and two that do not belong to either factor (questions 11 and 12).

The SA-CPOLD questionnaire described above was adapted to include a visual representation using the Talking Mat™ Visual Framework (Murphy & Boa, 2012) that was custom-designed for the study (Appendix J). The questionnaire was designed using a robust fibre mat (420 mm x 660 mm) on which the 16 statements of the SA-CPOLD were represented using visual images. For example, the Bildstöd symbol for "worried" was used to represent the Item 3 "*I am worried about my child's ability to talk and say words*." The visual images were presented on laminated cards (3 cm x 3 cm). The participants were asked to respond to the statements by placing each card under the relevant response category on the visual scale, which provided a visual adaptation of the abstract concepts from the Likert scale on the SA-CPOLD questionnaire (1= two thumbs down (strongly disagree); 2= one thumb down (disagree); 3= a symbol representing feeling neutral or being unsure (neutral/neither agree nor disagree); 4= one thumb up (agree) and 5 = two thumbs up (strongly agree)). Two training items, consisting of unrelated statements with an expected response, were used to ensure that participants understood fully what was expected of them. In the case where training items were failed, the instructions were repeated and the process of responding was demonstrated until these training items were passed or until the reason for an unexpected response was clarified. For example, the first training item statement is: *"My child likes eating ice cream."*

The SA-CPOLD (Romski et al., 2018) was originally adapted from the PPOLD questionnaire (Romski et al., 2018) for use with four cultural and linguistic groups within South Africa. For the purposes of this study, minor initial changes were made to the wording and order of the statements. In addition, the original five-point Likert scale was adapted to a four-point scale for trial in the pilot study, as discussed earlier. It was thought that a forced-choice scale may encourage participants to make a decision about whether they agree or disagree with the statement and to avoid the neutral midpoint that may be desirable in such a face-to-face structured interview where providing a desirable response may be a temptation (Chyung et al., 2017). The results from the pilot study revealed that caregivers perceived the four-point scale to be limiting in that it did not accurately reflect the full spectrum of potential responses regarding their perceptions of a child's language development. As a result, the original five-point scale was maintained for the main study. Incorporating the decisions of the caregivers who took part in the pilot study was deemed particularly important for the present study because evidence suggests that the appropriateness of different types of Likert scales may in part be due to cultural characteristics (Busch, 1993). As described above, graphic symbols were used to visually represent the response categories on the questionnaire in order to make them more comprehensible to the participants who may not be literate or who do not regularly read text.

Thereafter, an expert panel of five SLTs and three caregivers of young children who were receiving SLT services at the time were asked to review and provide feedback on the questionnaire. The SLTs had between three and 19 years of experience working with children who have language impairment, while the caregivers had children who had been attending speech-language therapy for a few weeks, three years and six years. Two of the caregivers spoke isiXhosa as their first language and were attending SLT services for difficulties related to language development. The feedback was used to make initial revisions to improve the comprehension of the wording and symbols selected as well as to improve the cultural appropriateness of the questionnaire. Revisions were made according to the feedback provided. These revisions included minor changes to the wording and symbols used to represent the response categories, for example the word "methods" was changed to "ways" and the arrows from the graphic symbols were removed as they were deemed highly symbolic and not readily comprehensible without prior experience.

Hereafter the SA-CPOLD was translated, based on Peña's (2007) work regarding methodological consideration in cross-cultural research. She explains that careful consideration needs to be given to ensure that the translation process considers that the linguistic meaning is maintained from one version to the other and that the translation process does not merely translate the words without consideration of how they will be interpreted by a different language group. In keeping with these guidelines, a blind-back translation process, as described in Bornman et al. (2010), was followed. This process included the following steps:

i. The South African English version of the SA-CPOLD (Appendix I1) was translated into isiXhosa by the same SLT who translated the MSEL.
ii. Thereafter, an SLT student who is fluent in both languages translated the provisional version of the isiXhosa questionnaire back into English (source language).
iii. Third, the two versions of the questionnaire were compared by the two translators and the researcher in order to identify discrepancies and to identify where statements on the provisional isiXhosa version may have meanings that differed from the original South African English version.
iv. Minor discrepancies were identified and discussed. For example, the word "say" became "pronounce" in the version that was translated back. These discrepancies were discussed, and a suitable translation was agreed upon in order to ensure that the meaning intended in the original version was retained.
v. Question 12 on the original South African English SA-CPOLD was moved to the end of the questionnaire, as it is the only question that specifically addresses perceptions about the usefulness of the SLT services received and it was necessary to reduce the risk of participants responding to subsequent questions in a socially desirable way.
vi. Minor grammatical and spelling errors were corrected.
vii. During the pilot study, the isiXhosa version of the SA-CPOLD (Appendix I2) was field tested and found to be adequate for the purpose of the current study.
viii. Other materials including the consent (Appendix F2) and assent letter (Appendix G2) and the biographical questionnaire (Appendix H2) were also rigorously translated using the above described blind-back translation method (Bornman et al., 2010).

2.5.7. The Mullen Scale of Early Learning (MSEL)

The Mullen Scale of Early Learning (Mullen, 1995) includes five subscales (gross motor, fine motor, visual reception, receptive language and expressive language) and is intended to assess children from birth to 68 months (Mullen, 1995). The assessment was designed on the premise that a child's overall intelligence is made up of a combination of interrelated but distinct cognitive skills and according to the assessment manual, each subscale provides sufficiently specific information for it to be independently interpretable (Mullen, 1995). The receptive and expressive language scales measure a child's ability to process incoming linguistic information and a child's language output skills respectively (Mullen, 1995). For this study, the child's language skills were the developmental domain of interest and for this reason only the receptive and expressive subscales were administered. The results of the language scales of the MSEL provided information that assisted in categorising the children into one of the three expressive language groups.

The MSEL has previously been adapted and translated into four languages spoken in South African, namely South African English, isiZulu, Setswana and Afrikaans (Bornman et al., 2010; Bornman, Romski, Tönsing, White, Barton-Hulsey and Morwane, 2018). In order to ensure its relevance to the context, the two subscales of interest were translated using a rigorous blind-back translation process from the South African English version into isiXhosa using the rigorous blind-back translation process described in Bornman et al. (2010). The following steps were taken, similar to the process for the translation of the SA-CPOLD.

i. The South African English version of the receptive and expressive language subscales of the MSEL was translated into isiXhosa by an SLT who speaks isiXhosa as her first language, but who is also proficient in English. Due to her professional experience, she is familiar with standardised assessments and has experience working with young children.
ii. Thereafter, an SLT student who is fluent in both languages translated the provisional version of the isiXhosa MSEL back into English (source language).
iii. Third, the two versions of the subscales were compared by the two translators and the researcher in order to identify discrepancies and to identify where assessment items may have changed from the original intended meaning.

iv. Discrepancies in meaning were identified and discussed. It was noted that some specific terminology had changed from the original to the back-translation, for example the "*Identifies pictures"* item had changed to *"Chooses pictures*". In instances such as these, the meaning of the original assessment item was discussed and mutually agreed upon translation was identified. This was completed for all items where discrepancies existed. In some instances, two options were provided where it was decided that children might know either the more traditional version or a more modern version. For example, "bomvu/ uRed" was used to denote the colour "red".

v. During the pilot study, the two subscales were field tested and found to be adequate for the purpose of the current study.

2.5.8. Video Recorder

The parent-child interactions were video-recorded by the researcher or her assistant using an Apple iPad (6th generation) 9.7'' Wi-Fi.

2.5.9. Three-item Play Set for Video-recorded Interaction

The three items selected for inclusion in the set were blocks, a ball and an illustrated children's book that is available in isiXhosa and English. The title of the book that was selected is *Sam's Smile* (Lusted & Van Wyk, 2002). It is a simple storybook with brightly coloured and engaging illustrations. These items were selected as they are common items that the child and caregiver were likely to have seen and engaged with before, either at home or in therapy sessions.

2.5.10. The Observation Checklist

The Observation Checklist (Appendix K) was used to record the expressive language group allocation of the child based on their expressive language use in the video-recorded interaction as well as their performance on the expressive language subscale of the Mullen Scale of Early Learning (MSEL) (Mullen, 1995).

2.6. Data Collection Procedures

2.6.1. General procedures

Once the Ethics Committee of the Faculty of Humanities at the University of Pretoria and the Eastern Cape Department of Health had granted ethics approval, potential participants were recruited by the SLTs employed at the elected hospital. The researcher contacted the potential participants to inform them about the study and to ask whether they would be interested in participating. Thereafter, a brief screening was done to ensure the accuracy of the information provided by the referring SLTs as well as to confirm that the caregiver and their child met all the inclusion criteria of the study. Once verbal agreement to participate was obtained and details confirmed, a mutually agreed upon date and time for data collection was set.

To ensure that all instructions and procedures were well understood by the participants and their children, a research assistant was asked to assist with the data collection. The research assistant was proficient in both isiXhosa and English. She was provided with information and training regarding the data-collection procedures and what was required of her, including guidelines for translation. In addition, the pilot study was used to familiarise her with the procedures, including the administration of the MSEL assessment.

The caregivers and their children who met the requirements for inclusion in the study met the researcher and her assistant in a quiet room at the hospital where their children receive speech-language therapy or, in cases where transportation was a challenge, at the participant's home. The researcher introduced herself and her assistant and explained the data collection procedure to the participant. The data-collection procedures included (a) obtaining participant consent and child assent; (b) completion of the biographical questionnaire; (c) completion of the SA-CPOLD questionnaire; (d) the video-recorded caregiver-child interaction; and (e) child language assessment using the MSEL.

In order to obtain participant consent, the consent letter was read to the caregivers in the language of their choice (isiXhosa or English). The caregivers were then provided with an opportunity to ask for clarity on any aspects that were not well understood. Thereafter, the caregivers were asked to complete the reply slip to indicate that they have provided informed consent and the children were provided with a brief description of the researcher and what was

expected of them. All verbal statements were supplemented with graphic symbols in order to aid the children's understanding. The children were asked to press their hand in the paint provided and put a handprint on the page to indicate assent. Once participant consent and child assent were obtained, the caregivers were asked to complete the biographical questionnaire with the help of either the researcher or the research assistant in the language of their choice

2.6.2 Specific data collection procedures

The SA-CPOLD in Talking Mat™ format (Murphy & Boa, 2012) was completed in a structured interview format by either the researcher or the research assistant in the language of the participant's choice. Once the procedure was well understood and the training items had been accurately completed, the caregivers were asked to decide whether they agreed, disagreed or neither agreed nor disagreed or felt neutral about each statement, and thereafter indicated to what extent they agreed or disagreed by placing the relevant symbol in the appropriate response category on the Talking Mat™ (please see Appendix J for an example of a completed Talking Mat™).

Next, the receptive and expressive subscales of the MSEL assessment (Mullen, 1995) were administered by either the researcher or the research assistant, in the language elected by the caregiver (i.e. isiXhosa or English). The assessment was administered in close alignment with the administration instructions described in the Administration Manual of the MSEL (Mullen, 1995). From the results, raw scores were converted to age-equivalent scores as per the guidelines set out in the assessment manual.

Finally, the participants were asked to engage with their children for a period of ten minutes using a set of three items. The items, namely blocks, a ball and an illustrated children's book that is available in English and isiXhosa, were chosen because they were considered to be items that would be familiar to the caregiver-child dyad and would not detract from the social interaction. The caregivers were requested to interact with their child in a way that reflects a typical social interaction with their child in a natural environment. Either the research assistant or the researcher provided the instruction and the other remained in the room to video-record the interaction.

2.7. Validity and Reliability

The original PPOLD measure from which the SA-CPOLD was devised was reviewed by undergraduate students who were enrolled in a language development course regarding reading level, presentation as well as whether they understood the statements (Romski et al., 2011). The final edited 20 items underwent exploratory factor analysis, which showed that two factors, namely success and difficulty, underlay the questionnaire items which were aimed at eliciting perceptions regarding how well parents were helping their child's language development and perceptions regarding severity of their child's language difficulties respectively. This was evidenced by Cronbach alpha scores of 0.57 and 0.50 before and after involvement in a language intervention programme. An additional four items did not belong to either factor. Further analyses found these factors to be reliable with internal consistency alphas before and after intervention, calculated at 0.86 and 0.91 for success and 0.71 and 0.79 for difficulty. Furthermore, the SA-CPOLD was used with a modest sample of caregivers from four linguistic groups within South Africa and was found to be a viable measure of perception in this context (Romski et al., 2018).

The MSEL assessment manual provides information on the reliability and validity of the assessment scales (Mullen, 1995). Research on the assessment's reliability indicated that the measure has a high internal consistency that was calculated using a modified split-half procedure that entailed conversion of raw scores into Rasch ability scores and then a correlation between odd and even scores for each age category. The correlation between the two halves was stepped up to full-test length by a Spearman Brown calculation that indicated very satisfactory internal consistency, which indicates good consistency across test items (Mullen, 1995). Good test-retest reliability was also reported with test-retest coefficients of 0.84 for the younger group and 0.76 for the older group on the four cognitive scales (fine motor, visual reception, receptive language and expressive language), which indicates stability of scores over time. In addition, interscorer reliability scores were calculated to be between 0.91 and 0.99, indicating consistent scores across scorers and clear administration instructions (Mullen, 1995).

In order to ensure that accurate deductions can be made from assessment scores, the assessment has been scrutinised for construct and concurrent validity. Construct validity was found to be high based on the results of research that investigated the developmental progression of scores, which

increased steadily as the children's ages increased; intercorrelations among T-scores based on relatively low squared correlations, which indicated distinct constructs; as well as an exploratory factor analysis using Principal-axis factor analyses of T-scores, which found the test to be a valid measure of cognitive function. Strong evidence for concurrent validity was also reported. For example, results yielded from the language subtests specifically were compared with those of the Preschool Language Assessment (Zimmerman, Steiner, Evatt Pond, 1979) and were found to demonstrate good convergent and divergent validity, as calculated by partial correlations using age equivalent scores using chronological age as a covariate (Mullen, 1995).

The MSEL normative data were not based on South African children, however it has been tested extensively in South Africa with typically developing children (Bornman et al., 2018) as well as with children with developmental disabilities (Romski et al., 2018). Although an isiXhosa translation of the MSEL has not yet been used in research, it has been used with children who speak another Nguni language, namely isiZulu (Romski et al., 2018).

2.8 Data analysis

In order to determine accurate categorisation of the children into one of the expressive language groups, the children's utterances during the caregiver-child interaction were transcribed using SALT conventions by either the researcher or a trained research assistant who spoke and wrote in the language used in the interaction, as explained earlier (Miller, Andriacchi & Nockerts, 2011; Miller & Iglesias, 2012). The transcriptions (100%) were reviewed by a second trained transcriber who also spoke and wrote in the language used in the interaction (isiXhosa or English). Discrepancies were identified and discussed until consensus was met. From this data, the number of different spontaneous intelligible words and mean length of utterance in words (MLUW) were calculated. The children's scores on the MSEL (Mullen, 1995) receptive and expressive subscales were tallied and converted into age-equivalent scores. In order to be categorised into a group, the children had to meet two of the three criteria for that group. The criteria for allocation into the different groups are described in Table 10. The one exception was Participant 7 who met one criterion for each group. Due to the variation in scores, it was decided that she should be placed in the speaking in single words and phrases group as this group represents the middle group, which was thought to most accurately represent her expressive language abilities.

Table 10

Child expressive language group categorisation

	Not speaking	Speaking in single words and phrases	Speaking in sentences
Number of different spontaneous intelligible words	Vocalisations and less than 10	10-20	21+
MLUW	<1	1-2.9	3+
MSEL expressive language raw score	Less than or equal to 20	21-30	31+

The participant biographical data, the child expressive language data and the SA-CPOLD data described above were captured on a Microsoft Excel spreadsheet. IBM SPSS version 25 was used to analyse the data. A student currently enrolled in a master's degree in AAC independently coded and captured 40% of the data on a Microsoft Excel spreadsheet. Percentage agreement (McMillan & Schumacher, 2014) was calculated using the following formula:

$$\frac{\textit{Total number of agreements.}}{\textit{Total number of agreements + disagreements}} \textit{ X 100 = Percentage Agreement}$$

$$\frac{208}{208 + 0} \text{ X } 100 = 100\%$$

According to Lombard, Snyder-Duch and Bracken (2002), agreement levels over 90% are considered acceptable for all research designs.

Descriptive statistics were used to analyse biographical data. In order to compare means across groups, a one-way ANOVA test was used, and post hoc Bonferroni tests were done when the overall test was significant. Pearson's correlation analysis was used to assess relationships between scores.

2.9. Ethical Considerations

The nature of the current study required that careful consideration be given to ensuring that all human participants were treated according to the highest ethical standards. It was made clear to participants and SLTs that participation in the research and recruitment process was entirely voluntary (Leedy & Ormrod, 2014) and no coercion, however subtle, was used to recruit participants (Flynn & Goldsmith, 2013). In addition, the participants were informed of the right to withdraw from the study at any stage without any negative consequences (Leedy & Ormrod, 2014). The ethical principles of informed consent, beneficence and non-maleficence, and respect for persons and how they were considered during the study, are discussed.

In upholding the ethical principles of *informed consent,* which encompasses that participants fully comprehend the information provided, all participants were provided with consent forms detailing the purpose of the study, what was expected of them and their child and the potential risks and benefits involved in participation, as well as their rights (Flynn & Goldsmith, 2013). The participants were provided with written consent forms and verbal information in their language of choice (isiXhosa or English) and graphic symbols were used to aid the participants' understanding further. In addition, the participants were provided with an opportunity to ask for clarification on anything that was not well understood in order to overcome any potential misunderstanding that may have arisen due to the researcher and participants coming from different cultural and linguistic backgrounds (Israel, 2015).

In keeping with the ethical principles of *beneficence and non-maleficence,* potential participants were also assured that they would be free from potential harm and that there were no risks involved in participating in the study. In addition, the indirect benefits that the results of the study may yield were explained (Israel, 2015). Furthermore, participants were reimbursed for their travel cost to and from the hospital. It was explained that this money was to cover the cost of their transportation and not to serve as a financial benefit for participating in the research.

Finally, the principle of *respect for persons,* which encompasses ensuring the privacy and confidentiality of participant information collected, was carefully considered. Although the nature of the study did not allow the participants to remain anonymous, the confidentiality of participants was maintained. All data collected from the participants and their children was kept confidential.

This was done by assigning participant numbers rather than using identifying information on the record sheets. In addition, the data will be securely stored for a period of 15 years and cannot be accessed by anyone other than the researcher and her supervisor (Israel, 2015). It will be stored in electronic and hard copy at the Centre for Augmentative and Alternative Communication (AAC) at the University of Pretoria

3. RESULTS

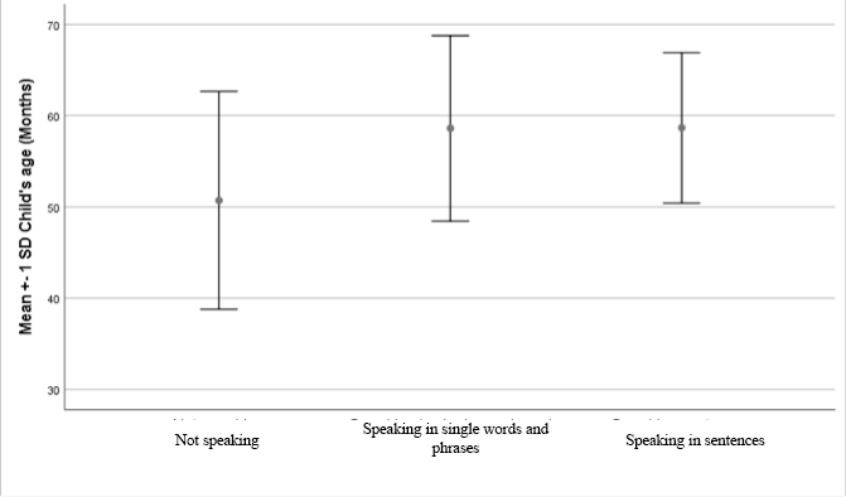
The results are detailed below according to the five sub-aims of the study.

3.1. Description of Child and Caregiver Characteristics by Expressive Language Group

As described in Table 11, most of the children were classified as not speaking (n=14), followed by those speaking in single words and phrases (n=10). Those children speaking in sentences (n=6) formed the smallest group. The three expressive language groups were compared on several variables, including caregiver and child age, duration and frequency of therapy and child diagnosis. These comparisons are provided in Table 12.

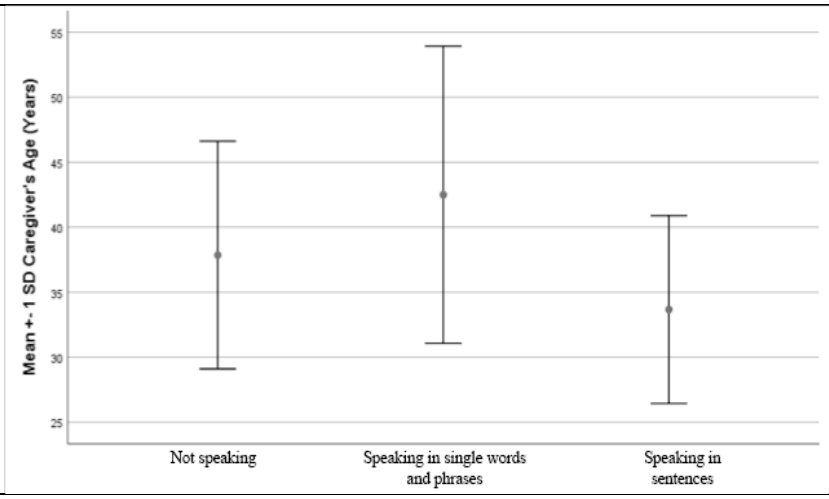
Table 11

Biographical detail comparison between expressive language groups

Description	Data (n=30)
Child age The children categorised as speaking in single words and phrases and those who were speaking in sentences had similar mean ages (*M*=58.6 and *M*=58.7 respectively), while the children who were not speaking had a slightly lower mean age (*M*=50.7). However, the difference in mean age between groups was not statistically significant (p=0.203).	

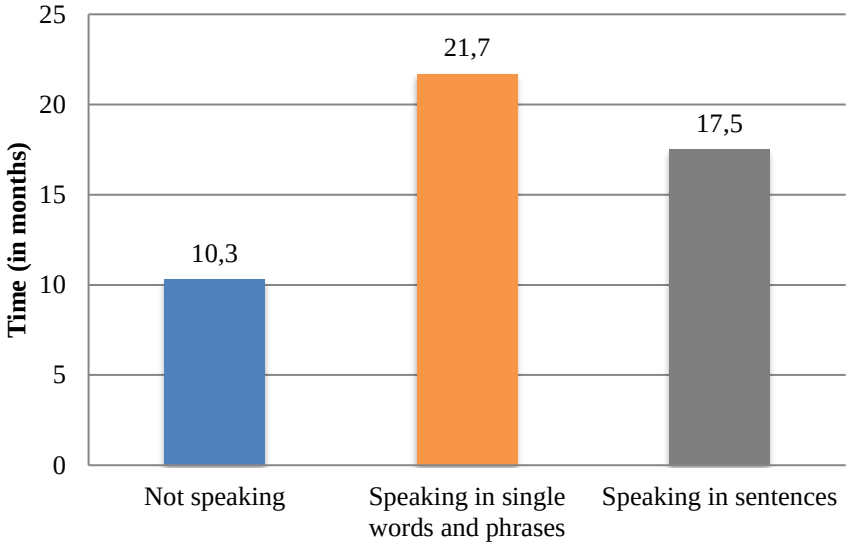
Caregiver age

The caregivers of the children who were speaking in single words and phrases were the oldest (*M*=42.5), followed by those who were not speaking (*M=37.9)* and those whose children were speaking in sentences (*M*=33.7). The difference in mean age between groups was not statistically significant (p=0.152).



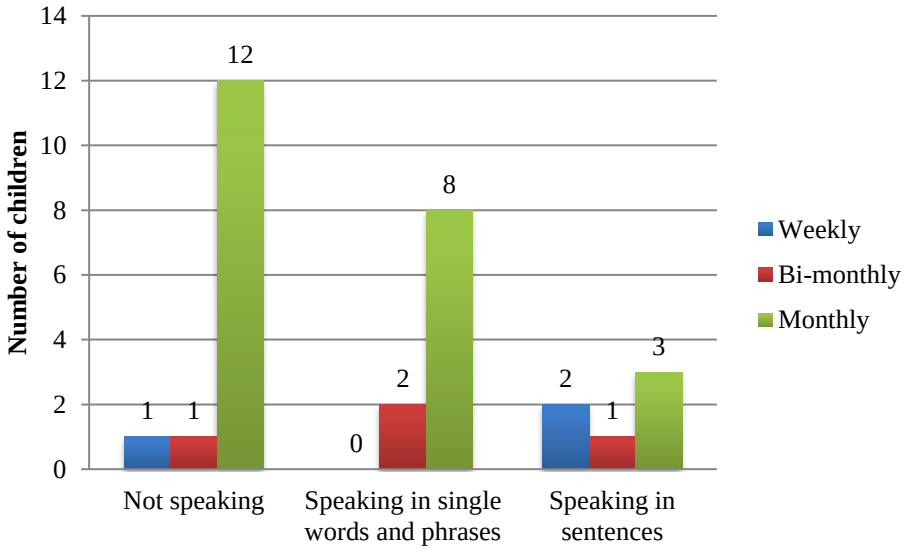
Length of therapy attendance

The children who were speaking in single words and phrases (*M*=21.7; *SD*=19.8) and those speaking in sentences (*M*=17.5; 21.9) had been attending therapy for the longer than those who were not speaking (*M*=10.3; *SD*=10.6); however, these groups also showed great variation between participants. Overall, there was no statistically significant difference between groups in terms of how long they had been attending therapy (p=0.294).



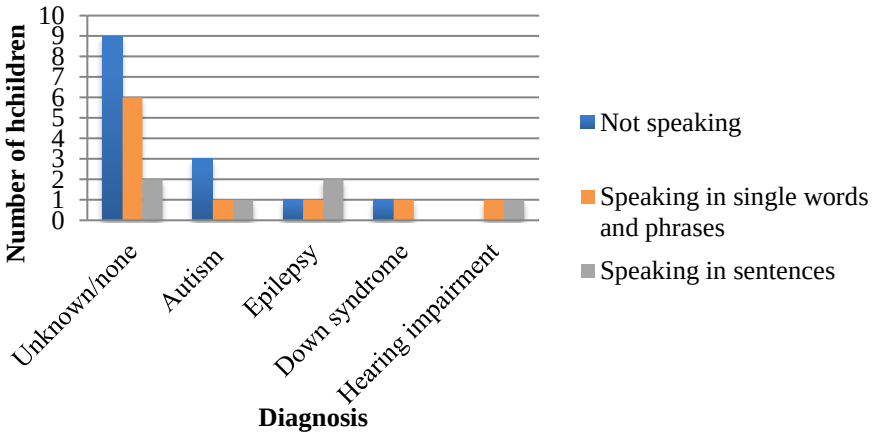
Frequency of therapy

Across groups, most of the children attended monthly therapy (n=23), with the remaining seven being spread across expressive language groups. There was no statistically significant difference between the three groups (p=.208).



Child diagnosis

Among the three expressive language groups, there was much variety in aetiology of the language delay. Barring the diagnoses of Down syndrome and hearing impairment, which neither included a child who was speaking in sentences nor a child who was not speaking, the remaining three groups, had at least one child from all three expressive language groups.



3.2. Description of Caregivers' Perceptions of their Child's Language Skills across Expressive Language Groups

The mean responses to the SA-CPOLD statements across child expressive language groups are detailed in Table 12. The statements are arranged by factor assignment. A one-way ANOVA was used to compare means across groups and post hoc Bonferroni tests were done when the overall test was significant. A p-value <0.05 was considered statistically significant. The participants were asked to indicate their level of agreement with each statement, where 1 (strongly disagree) was the lowest and 5 (strongly agree) was the highest. Therefore, a higher mean value indicates a higher level of agreement on a particular item.

Table 12

Mean responses across expressive language groups by factor

Item	Item no.	Group			Total	One-way ANOVA	
Factor 1: Success		Not speaking	Speaking in single words and phrases	Speaking in sentences			
		Mean	Mean	Mean	Mean	F	P*
My child can tell me what he/she wants in a way that I can easily understand.	1	3.6	3.9	4.2	3.8	0.423	0.660
My child has a desire to communicate with me/ my child tries to speak to me.	2	4.5	4.5	4.7	4.5	0.135	0.874
My child can talk as well as other children of his/ her age.	4	1.6	1.9	2.8	2.0	2.086	0.144
My child can understand things that we say to him/ her as well as other children of his/ her age.	6	3.6	4.1	3.2	3.7	1.273	0.296
My child and I have found ways to talk to each other that work very well for us.	8a	3.7	4.4	3.8	4.0	1.933	0.164
My child and I have found ways to understand each other that work very well for us.	8b	3.6	4.4	4.3	4.0	4.962	**0.015***
I feel confident that I can help my child talk better.	10a	3.9	4.8	4.5	4.3	2.762	0.081
I feel confident that I can help my child understand language better.	10b	4.3	4.8	4.5	4.5	1.160	0.329
Speech therapy (at the hospital) has helped me and my child to talk better.	13a	4.2	4.7	4.5	4.4	1.363	0.273
Speech therapy (at the hospital) has helped me and my child to understand language better.	13b	4.1	4.5	4.5	4.3	0.500	0.612
Factor 2: Difficulty							
I am worried about my child's ability to talk and say words.	3	4.7	4.5	3.8	4.5	3.628	**0.040***
I feel my child needs extra help so that he/she can communicate better.	5	4.9	5.0	4.7	4.9	2.615	0.092
My child is naughty because he/she cannot tell me what he/she wants.	7	3.2	3.1	3.2	3.2	0.017	0.938
Because my child cannot talk properly, he/she struggles to tell me what he/she wants or needs.	9	4.2	3.6	3.3	3.8	1.144	0.333
Not included in either factor							
My child is slow to talk because he/she is slow with everything like walking and learning.	11	3.1	3.2	2.3	3.0	0.799	0.460
Even though my child is slower to talk than other children, he/she will catch up eventually.	12	4.3	4.4	4.8	4.4	1.223	0.310

Note. N=30 *p=<.05.

Nine of the 10 items assigned to the success factor were higher for the speaking in single words and phrases than the not speaking group. Item 2 (*My child has a desire to communicate with me/ my child tries to speak to me*) was the same for both groups (M=4.5*)* and only slightly higher for the speaking in sentences group (M=4.7). As expected, for many of the items (6, 8a, 8b, 10a, 10b,

13a, 13b*)*, the means for the speaking in sentences group were higher than the not speaking group but, perhaps surprisingly, lower than the speaking in single words and phrases group.

For the speaking in sentences group, the remaining three items (1, 2, 4*)* had higher means than the not speaking and the speaking in single words and phrases groups. Means on items assigned to the success factor were all at or above 3.6 across groups, with the exception of Item 4 *(My child can talk as well as other children of his/her age)* for which the not speaking group had the lowest (*M*=1.6*)* and the speaking in sentences group had the highest *(M*=2.8*).*

On Item 8b *(My child and I have found ways to understand each other that work very well for us)*, there was a statistically significant difference between the not speaking and speaking in single words and phrases groups (*p*=0.015), with the latter reporting more agreement with the statement. The difference in mean response between these two groups on Item 10a *(I feel confident that I can help my child talk better)* approached but did not reach a conventional level of significance (*p*=0.081) in the same direction. Figure 2 shows the mean and standard deviation of responses on each item for the whole sample and Figure 3 shows the mean and standard deviation of responses across groups. Responses on several items varied considerably for participants in the speaking in sentences group.

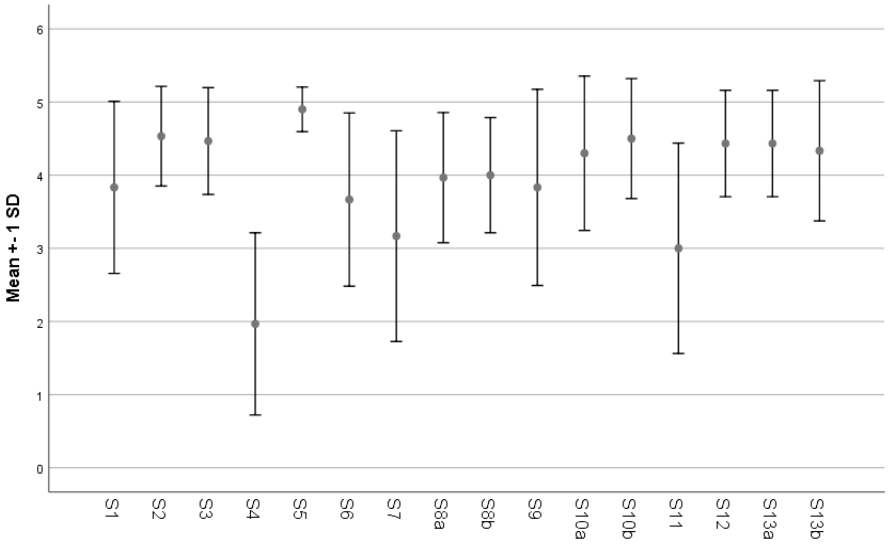


Figure 2**.** *Mean and standard deviation of responses per item*

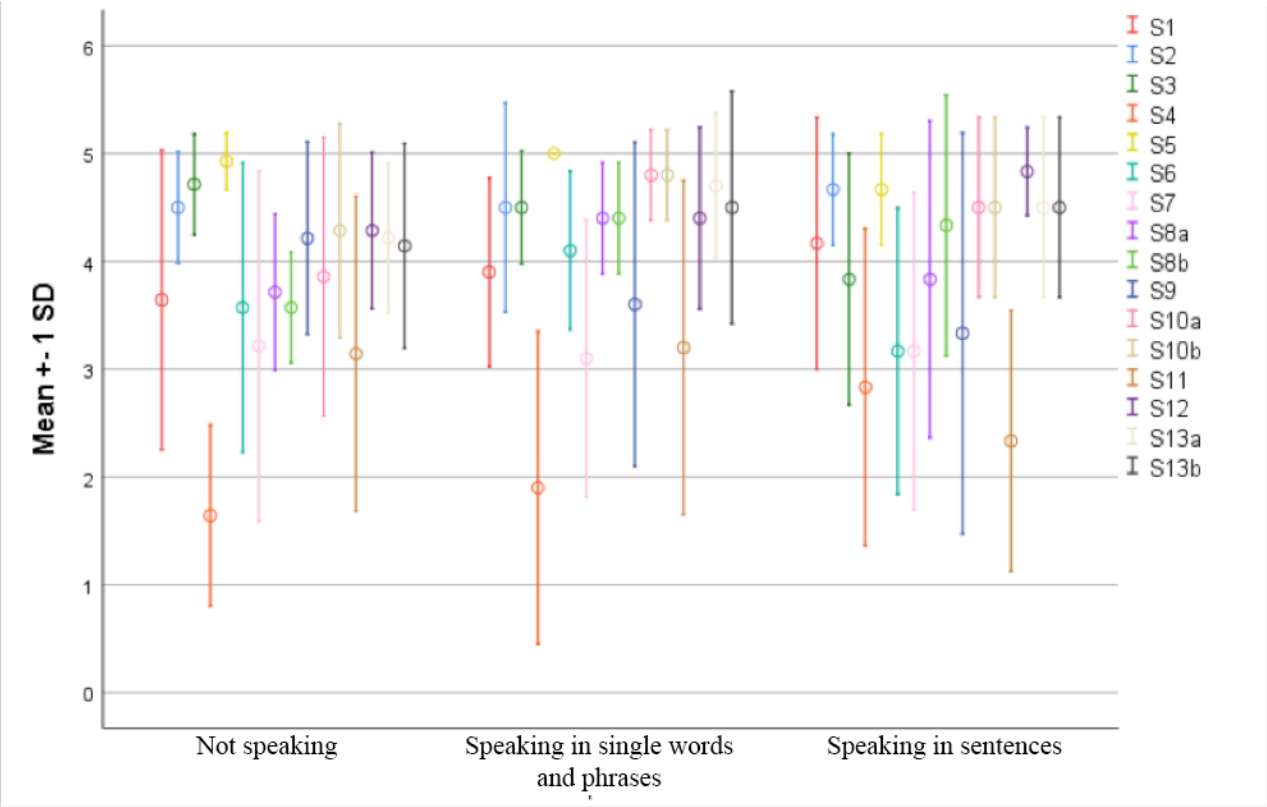


Figure 3. *Mean and standard deviation of responses across the three expressive language groups*

As expected, responses on items assigned to the difficulty factor were higher for the not speaking group on three of the items (3, 5, 9*)* compared to the other two groups. For these items, the speaking in sentences group had the lowest means. The exception to this was Item 7 *(My child is naughty because he/she cannot tell me what he/she wants)*, to which responses were similar across groups. The means differed significantly on Item 3 *(I am worried about my child's ability to talk and say words)* between the not speaking and speaking in sentences groups (p=0.04), with the latter group reporting less agreement with the statement. The mean on this item for the speaking in single words and phrases group was only slightly lower than for the not speaking group.

For the two items that did not load on either factor, namely Item 11 *(My child is slow to talk because he/she is slow with everything like walking and learning)* and Item 12 *(Even though my child is slower to talk than other children, he/she will catch up eventually)*, the mean for the not speaking group was lower than the speaking in single words and phrases group. For both items, the

mean for the speaking in sentences group was the highest, indicating that participants agreed more with the statement, although participants across groups were in relative agreement that their child would catch up to their peers eventually.

3.3. Description of caregivers' perceptions of their child's language development related to success

Table 13

Group comparisons on success factor

	Expressive Language Group							
	Not speaking		**Speaking in single words and phrases**		**Speaking in sentences**		**F**	**p**
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation		
Success	3.7	.4	4.2	.5	4.1	.7	3.099	0.061

The results detailed in Table 13 demonstrate that there was a non-significant difference between the three expressive language groups in terms of success factor. The not speaking group had the lowest mean (M=3.7), while the speaking in single words and phrases and speaking in sentences group had almost equal means (4.2 and 4.1 respectively). Figure 4 highlights that the largest difference was found between the not speaking and speaking in single words and phrases group and that range of responses from the caregivers of children who were speaking in sentences was large (SD: 0.7), indicating that there was much variation in response among caregivers in this group.

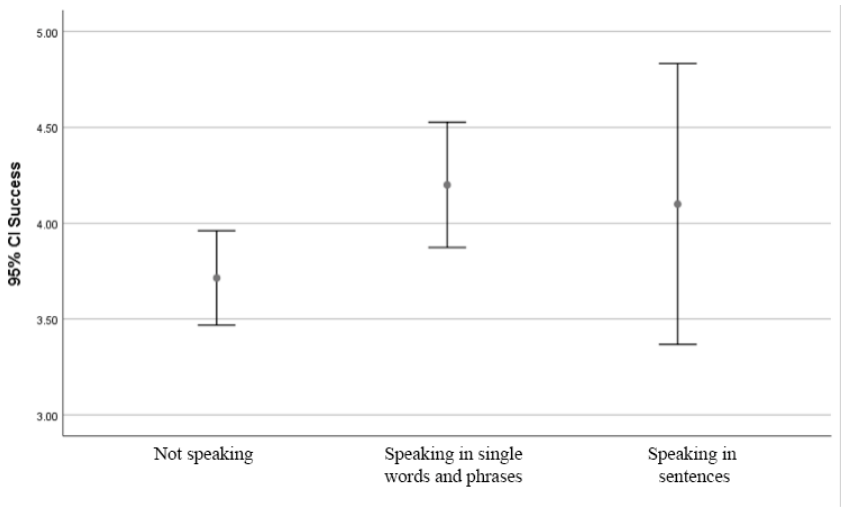


Figure 4. *Means and range of responses across expressive language groups for success factor*

3.4. Description of caregivers' perceptions of their child's language development related to difficulty

Table 14 details mean responses and comparisons between groups related to the difficulty factor.

Table 14

Group comparisons on difficulty factor

	Expressive Language Group							
	Not speaking		**Speaking in single words and phrases**		**Speaking in sentences**		**F**	**p**
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation		
Difficulty	4.3	.6	4.1	.7	3.8	1.2	1.018	0.375

The results show that there was no statistically significant difference between the three groups, but that the not speaking group had the highest mean (M=4.3), showing that they agreed more with the statements, followed by speaking in single words and phrases group (M=4.1) and the lowest in the speaking in sentences group (M=3.8), showing that they agreed less with the statements. This is expected, as children who are not speaking would be considered to have more difficulty than peers who are speaking in sentences. Figure 5 shows a great overlap of the confidence intervals and not much difference between the means. The standard deviation was smaller for this

group (*SD*=0.6), followed by speaking in single words and phrases group (*SD=0.7*) and then the speaking in sentences group (*SD*=1.2), indicating that the participants in the first two groups showed much less variation in responses than those in the speaking in sentences group.

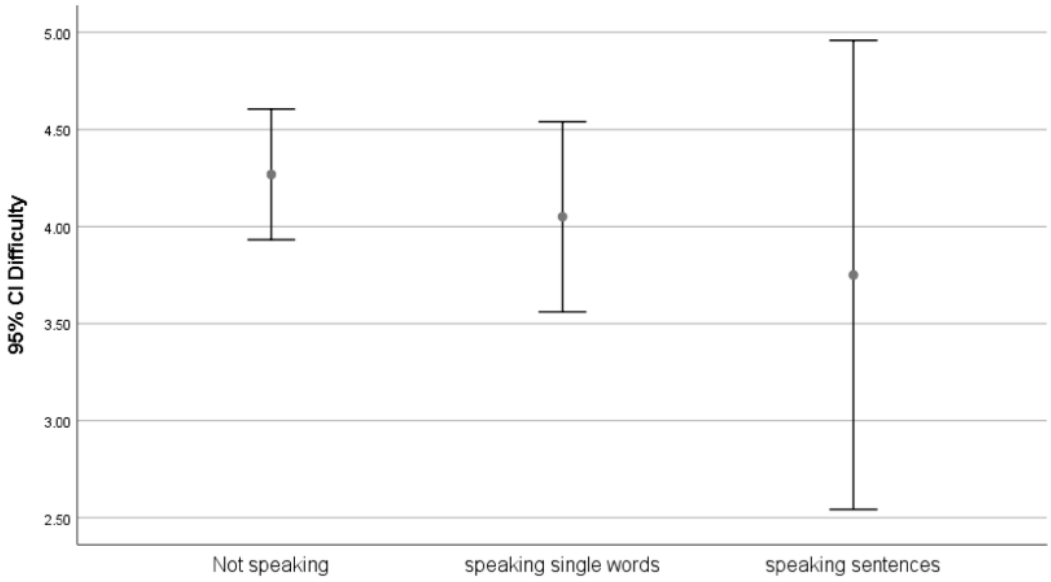


Figure 5**.** *Means and range of responses across expressive language groups for difficulty factor*

3.5. Description of caregivers' perceptions of their child's language development on the basis of therapy duration and frequency and child age

3.5.1 Success factor

As can be seen in Tables 15 and 16, Pearson's correlation revealed that there was no relationship between success factor scores and child age (*r*=0.140) and therapy duration (*r*=0.154). There was also no difference in mean success score between children who received therapy at different frequencies (*p*=0.760). Additional analysis found that there was also no relationship between success factor scores and caregiver age (*r=-0.004).*

Table 15

Correlation between caregivers' perceptions of success: child age and therapy duration

		Success
Child age (M)	Pearson Correlation	.140
	Sig. (2-tailed)	.461
	N	30
Therapy duration	Pearson Correlation	.154
	Sig. (2-tailed)	.415
	N	30

Table 16

Correlation between caregivers' perceptions of success: therapy frequency

		Success	
		Mean	Standard deviation
Therapy Frequency	1 time/week	4.17	.46
	2 times/month	3.88	.64
	1 time/month	3.94	.54
	F and p value	0.227	0.760

3.5.2. Difficulty factor

Table 17 demonstrates Pearson's correlation scores on the difficulty factor for age and therapy duration. The results revealed that there was a very weak negative relationship between difficulty factor scores and child age (r=-0.235) and treatment duration (r=-0.183), both of which were not significantly different. Table 18 demonstrates that there was also no statistically significant difference in mean success score between those who received therapy at different frequencies (p=0.737). Additional analysis found that there was also no relationship between difficulty factor scores and caregiver age (*r=0.008).*

Table 17

Correlation between caregivers' perceptions of difficulty: child age and therapy duration

		Difficulty
Child age (M)	Pearson correlation	.235
	Sig. (2-tailed)	.211
	N	30
Therapy Duration	Pearson correlation	-.183
	Sig. (2-tailed)	.334
	N	30

Table 18

Correlation between caregivers' perceptions of difficulty: therapy frequency

		Difficulty	
		Mean	Standard deviation
Therapy frequency	1 time/week	4.4	.6
	2 times/month	4.0	.6
	1 time/month	4.1	.8
	F and p	0.308	0.737

4. DISCUSSION

4.1. Description of Child and Caregiver Characteristics between Expressive Language Groups

The results indicate that there were no significant differences in terms of child or caregiver age and duration in therapy. Across groups, most of the children attended monthly therapy, with a few attending bi-monthly or weekly. In addition, in all three groups, most of the children had not received a diagnosis or the diagnosis was unknown to the caregivers while the remaining children had a range of medical diagnoses. Thus, it is evident that these factors were unlikely to have contributed to the differences in perceptions between groups.

4.2. Description of Caregivers' Perceptions of their Child's Language Skills

Most caregivers, despite acknowledging that their child had difficulty with language development, felt that their child was eager to communicate with them. They also felt positive

about their child's ability to communicate their desires. In addition, the caregivers felt that they were able to assist their child to communicate more effectively as well as assist them in developing more advanced language skills. This may be explained in part by the fact that these children were all receiving SLT services, which may have improved child communication skills and assisted caregivers in finding more effective methods to communicate with their child. This is supported by the findings by Romksi et al. (2011), who reported that parents demonstrated improved perceptions of their child's language development after a three-month intervention programme. Furthermore, as supported by the findings of Baker, Blacher, Crnic and Edelbrook (2002) and Hastings, Allen, McDermott and Still (2002), parent positive perceptions may also possibly be attributed to the ability of families to cope with the difficulties related to raising a child with a disability, by holding more positive perceptions.

The caregivers of the children who were speaking in single words and phrases felt more positive than those whose children were not speaking about their child's ability to express their desires in a way that they could understand. They also stated that they had found ways to communicate more effectively with their child. Furthermore, these caregivers also felt more confident in helping their child to develop their language skills and that SLT services had assisted them in improving both their own and their child's ability to communicate more effectively. In particular, caregivers in this group felt significantly more positive that they and their child had found ways to understand each other more effectively. These findings are also consistent with those reported by Romski et al. (2011), who stated that parents of children who demonstrated more spontaneous communication held more positive perceptions than the parents of children of the same age, but who were not speaking. These findings were also supported by the findings of other researchers who found that caregivers of children with more advanced language skills held more positive perceptions regarding their child's communication and had higher expectations for the future (Brady et al., 2006; Sommers et al., 1994). These findings support the notion that improvements in child expressive language may be linked to improved caregiver perceptions of language development (Romski et al., 2011; Smith et al., 2011).

Apart from the items related to acknowledgement of their child's expressive and receptive language difficulties, the caregivers of children who were speaking in sentences felt positive about their child's communication skills. These caregivers agreed more than the caregivers of children

in the other two expressive language groups that they understood what their child wanted and that their child was able to express him/herself and that they were able to speak as well as their peers. These findings provide additional support for the link between caregiver perceptions and child language skills (Brady et al., 2006; Romski et al., 2011) and the notion that caregivers are able to accurately report on their child's language skills (Harty et al., 2006). Conversely, the caregivers of the children who were speaking in sentences agreed less than caregivers of the children who were speaking in single words and phrases with statements related to their child understanding as well as their peers and statements related to having found more effective methods of communicating with their child. In addition, they felt slightly less confident in their ability to assist their child in improving their language skills and that speech-language therapy had been of assistance in this regard. These findings align with those by Brady et al. (2006), who reported that parental perceptions and expectations varied depending on their child's developmental level, such that mothers of children with more advanced language skills desired that their children develop improved language and social skills, while those whose children who had less advanced language skills desired their child to begin to use spoken language. The mothers of the children with more advanced language skills in that study also reported taking on the role of therapist or teacher less than the other mothers. These findings may provide a possible explanation for why caregivers of children who were speaking in sentences in the present study reported slightly less agreement on the items pertaining to finding more effective methods of communicating with their child and less confidence in assisting their children in improving their communication skills than the caregivers of children who were speaking in single words and phrases.

Although caregivers across the three expressive language groups all reported that they were concerned about their child's ability to speak, caregivers of children who were not speaking expressed significantly more concern than those whose children were speaking in sentences. However, caregivers across expressive language groups agreed that their child required assistance to improve their language skills. In addition, where caregivers of the children who were not speaking felt their child experienced difficulty in expressing their needs, the caregivers in the other two groups agreed less. Overall, caregivers across all three groups were undecided about whether their child was naughty because of their communication difficulties. Generally, the caregivers in the not speaking group perceived their child's language skills as more severe, followed by the caregivers of children who were speaking in single words and phrases and those whose children

were speaking in sentences. These findings once again provide support for the fact that caregivers are able to accurately report on their child's language skills (e.g. Harty et al., 2006), and that caregivers' perceptions of their child's language skills are related to their child's expressive language skills (Romski et al., 2011; Romski et al., 2018).

The variation in perceptions of caregivers regarding the link between their child's language skills and motor and cognitive skills may be a reflection of the variation in aetiology of the children's language difficulties. Interestingly, regardless of their child's expressive language level, caregivers were hopeful that their child would catch up to their peers, which may once again reflect a tendency of parents to hold more positive perceptions as a means to cope with the stress of raising a child with a disability (Baker et al., 2002; Hastings et al., 2002).

4.3. Description of Caregivers' Perceptions of their Child's Language Development Related to Success

The responses on items related to success regarding their child's language development showed that caregivers of children who were not speaking did not feel as positive when compared to those in the other two groups, although this did not reach a conventional level of significance. This is in congruence with findings from other researchers who suggest that children who make progress in therapy and thus have better expressive language skills may hold more positive perceptions regarding their child's language skills (Romski et al., 2011; Romski et al., 2018). The caregivers of the children who were speaking in sentences did, however, express large variation in their perceptions regarding their child's success with communication skills. This may be due to the fact that, despite these children all having met the criteria for this group, there was still quite large heterogeneity in their language skills. Further investigation of the responses from the caregivers reflects that the children with stronger expressive language skills within this group did hold more positive perceptions than those with weaker skills.

4.4. Description of Caregivers' Perceptions of their Child's Language Development Related to Difficulty.

Although perceptions related to difficulty regarding their child's language difficulty decreased slightly with improved child language skills, caregivers across all three groups acknowledged that

their child was demonstrating difficulties with language development. This finding was expected, as all children included in the study were receiving SLT services. Overall, there was not a significant difference in response between the groups, which may further support the findings that caregivers evaluate and adjust their expectations of their child's language difficulties according to their child's individual skill level (Brady et al., 2006). Thus, it may be that caregivers of children who are not yet speaking, continue to hope that their child will begin to use verbal communication, while those caregivers of children with more advanced skills may wish that their child would develop more complex language skills that more closely resemble those of typically developing children. Once again, the heterogeneity of language skills amongst children who were speaking in sentences may have resulted in the variation of perceptions among this group of caregivers.

4.5. Description of Caregivers' Perceptions of their Child's Language Development on the Basis of Therapy Duration and Frequency, and Child Age.

The caregivers did not demonstrate significantly different perceptions regarding their child's language development on the basis of duration and frequency of therapy. It is possible then that intensive, direct contact with the SLT may not be the primary factor impacting on caregiver perceptions of their child's language skills. These findings relate to those of Bunning et al. (2014), who found improved caregiver perceptions of their child's language skills despite the fact that follow-up with the professionals only occurred once a month over a six-month period. In addition, the caregivers' perceptions did not appear to differ significantly on the basis of child or caregiver age. These findings are similar to those of Vilaseca, Ferrer and Guardia Olmos (2014), who examined, among other variables, positive perceptions of caregivers of children with ID and reported that there was no correlation between levels of positive perceptions and the age of the child. That is, both mothers and fathers had co-occurring positive and negative perceptions throughout the child's lifespan. The same study also found that caregiver age did not significantly impact levels of positive perceptions (Vilaseca et al., 2014).

These results suggest that these additional factors may not have impacted on the perceptions of the caregivers as much as the severity of language difficulty their child exhibits. That is, the caregivers in the present study appeared to base their perceptions more on the language skills their

child was currently demonstrating than the amount of time they had been receiving SLT services, how frequently their child attended therapy and their own or their child's age.

5. CRITICAL EVALUATION, IMPLICATIONS AND CONCLUSIONS

5.1 Critical Evaluation of the Study

5.1.2. Strengths

This study represents a first attempt to describe the perceptions of isiXhosa-speaking caregivers regarding their child's language difficulties. An initial strength is that the SA-CPOLD questionnaire had previously been used with four linguistic groups within South Africa and had been found to be a viable measure for use in the context (Romski et al., 2018). In addition, the use of feedback from an expert panel regarding the SA-CPOLD questionnaire and the use of a rigorous blind-back translation method (Bornman et al., 2010), as well as the pilot study, served to improve the reliability and validity of the data collection instruments. Additionally, the use of Talking Mats™ (Murphy & Boa, 2012) to complete the SA-CPOLD reduced the impact of possible literacy difficulties and potential unfamiliarity of participants with written materials. Furthermore, including two practice items strengthened the reliability of the SA-CPOLD results, as participants gained confidence with regard to the procedure and what was expected of them.

To further ensure the adequacy and comprehension of data collection materials and procedures, a pilot study was conducted. These findings served to further strengthen the reliability and validity of the materials, procedures and consequently the data obtained. In addition, the study utilised three different independent measures (namely, MSEL scores, and SALT descriptions of MLU and number of different words) to place the children into the different expressive language groups, which improved the reliability of these placements.

5.1.2. Limitations

Several limitations to the present study exist. First, there were unequal numbers of children in the different expressive language groups, which limits the extent to which generalisations can be made. Additionally, although all the caregivers accompanied their child to speech-language therapy, it is unknown to what degree different caregivers were involved in the therapy process or

the type of therapy approach used. It is thus possible that varying degrees of caregiver involvement and different therapy approaches may have impacted on the caregivers' perceptions. Furthermore, the aetiologies of the children's language difficulties were diverse (and unknown in many cases) and this may also have impacted caregiver perceptions. Moreover, four of the participants were unable to come to the hospital for data collection and thus, data collection had to be done at their homes. The different settings may have had an impact on their perceptions. Finally, no data on caregiver education level was collected and this may have allowed for an additional variable to explore.

5.2 Clinical Implications

The results from the present study have several important clinical implications for SLTs who provide language therapy to young children and their families who are from an isiXhosa-speaking background. First, the results provide evidence that these caregivers can accurately report on their child's language development. SLTs should therefore take the perceptions of caregivers into account in planning intervention that is congruent with the priorities and perceptions of the families they work with. This is particularly relevant when working with families from diverse cultural and linguistic backgrounds, in order to ensure that the therapy provided is culturally responsive (Kummerer et al., 2007) and based on the values, beliefs, resources and values of the family (Balton et al., 2019; Marshall et al., 2017). Including a caregiver perception measure, such as the SA-CPOLD, as part of a comprehensive assessment protocol may assist SLTs in identifying areas requiring further exploration. For example, if a caregiver reports that they have found effective methods to communicate with their child, this may warrant further investigation, as research suggests that caregivers of children with language difficulties would like SLTs to explore strategies already implemented at home (Marshall et al., 2007). Moreover, it can assist SLTs to explore their perceptions regarding possible causes and expectations of their child's language development, which was a point that various researchers have suggested as good practice when working with families of young children, especially when they come from diverse cultural and linguistic backgrounds (Kummerer, & Lopez-Reyna, 2006; Marshall et al., 2007).

Second, the results also suggest that SLTs working with young children who are not speaking or who are only beginning to speak, should provide counselling and specific training on identifying

and facilitating alternative communication modes already used by the child. This may improve caregiver perceptions of the child's current communication functioning. This is particularly important when considering the link between caregiver perceptions of their child's communication skills and stress (Smith et al., 2011) as well as the possible relationship between self-efficacy and involvement in therapy (Harty et al., 2006). Moreover, it may be useful for SLTs to incorporate in their service delivery, counselling to systematically improve the perceptions of caregivers regarding their child's language development (Sommers et al., 1994). Third and finally, it is important to acknowledge that caregivers of children with language difficulties, regardless of severity, are concerned about their child's communication skills and desire for their child to develop more advanced skills than those they are currently demonstrating. It is thus important that the perceptions of caregivers who have children with less severe language difficulties are also explored.

5.3 Recommendations for Further Studies

Following this study, a number of future research directions become evident. It would be useful to replicate this study with a larger sample size, while ensuring a consistent number of participants across the three expressive language groups. This would increase the generalisability of the results. In addition, it would be valuable to explore and contrast the effect of family-centred therapy versus the standard therapy approach on the perceptions of isiXhosa-speaking caregivers. These findings may provide insight on the impact of these approaches on the perceptions of these caregivers, which may assist SLTs working with this population to design interventions that enhance caregiver perceptions. Additional research is also required to determine whether SLT services are successful in improving the perceptions of isiXhosa-speaking caregivers, by measuring their perceptions before therapy and after discharge.

In addition to the suggestions already put forward, employing qualitative research designs to explore the reasons for caregiver perceptions more deeply would provide SLTs with useful information on the priorities and adaptations required to provide more culturally responsive speech-language therapy services to families who come from an isiXhosa cultural background. It would also be valuable to explore the perceptions of caregivers from other cultural and linguistic groups within South Africa, and those from rural areas in order for SLTs working with these

populations to design their services accordingly. South Africa is a large country, with much cultural and linguistic diversity, and it cannot be assumed that all caregivers across language and cultural groups and geographic areas will hold similar perceptions. Furthermore, exploring the perceptions on the basis of aetiology and caregiver-child relationship may provide information on additional factors to be considered in ensuring intervention is individualised and meets the needs of the caregiver who will be involved in intervention. This is particularly important given that many children in South Africa are raised by a family member who is not one of their parents. Finally, a study to evaluate the impact of an intervention programme that systematically targets caregiver perceptions of their child would provide valuable insight regarding whether such a programme would be effective in strengthening their perceptions.

5.4 Conclusion

This study provides preliminary information on the perceptions held by isiXhosa-speaking caregivers of young children who receiving speech-language therapy, regarding their child's language development, across three expressive language groups. The results suggest that, despite acknowledging and expressing concerns regarding their child's language skills, these caregivers generally held positive perceptions about their child's language development as well as their own ability to facilitate more effective communication with their child. The findings of the present study do, however, suggest that caregivers of children with more advanced expressive language skills may hold somewhat more positive perceptions than those of children who are not yet speaking, although this did not reach a conventional level of significance. Finally, while expressive language level impacted on the perceptions of these caregivers, duration and frequency of therapy and the age of the child did not seem to have an impact. This chapter concluded with a critical evaluation of the study that explored the strengths and weaknesses, after which clinical implications were described and recommendations for further study were made.

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Appendix A

Ethics Clearance Letter

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Humanities 100.
1919 - 2019

Research Ethics Committee

1 April 2019

Dear Ms Bentley

Project:	**Perceptions about language development of isiXhosa-speaking primary caregivers of children receiving speech-language therapy in the Eastern Cape, South Africa**
Researcher:	**L Bentley**
Supervisor:	**Prof J Bornman**
Department:	**Centre for Augmentative and Alternative Communication**
Reference Number:	**18344918 (GW0181106HS)**

Thank you for your response to the Committee's correspondence.

The application was **approved** by the **Research Ethics Committee** at an ad hoc meeting on 1 April 2019 as the outstanding permission was submitted as requested. Data collection may therefore commence.

Please note that this approval is based on the assumption that the research will be carried out along the lines laid out in the proposal. Should your actual research depart significantly from the proposed research, it will be necessary to apply for a new research approval and ethical clearance.

We wish you success with the project.

Sincerely

pp.

Prof Maxi Schoeman
Deputy Dean: Postgraduate Research and Ethics
Faculty of Humanities
UNIVERSITY OF PRETORIA
e-mail:PGHumanities@up.ac.za

cc: Prof J Bornman (Supervisor and HoD)

Appendix B

Permission from Eastern Cape Department of Health

Province of the
EASTERN CAPE
HEALTH

Enquiries: Zonwabele Merile
Email: zonwabele.merile@echealth.gov.za
Date: 02 April 2019

Tel no: 083 378 1202
Fax no: 043 642 1409

RE: Perceptions about language development of isiXhosa-speaking primary caregivers of children receiving speech-language therapy in the Eastern Cape, South Africa. (EC_201903_003)

Dear Ms L. Bentley

The department would like to inform you that your application for the abovementioned research topic has been approved based on the following conditions:

1. During your study, you will follow the submitted protocol with ethical approval and can only deviate from it after having a written approval from the Department of Health in writing.

2. You are advised to ensure, observe and respect the rights and culture of your research participants and maintain confidentiality of their identities and shall remove or not collect any information which can be used to link the participants.

3. The Department of Health expects you to provide a progress update on your study every 3 months (from date you received this letter) in writing.

4. At the end of your study, you will be expected to send a full written report with your findings and implementable recommendations to the Eastern Cape Health Research Committee secretariat. You may also be invited to the department to come and present your research findings with your implementable recommendations.

5. Your results on the Eastern Cape will not be presented anywhere unless you have shared them with the Department of Health as indicated above.

Your compliance in this regard will be highly appreciated.

SECRETARIAT: EASTERN CAPE HEALTH RESEARCH COMMITTEE

Appendix C

Hospital Manager Consent Letter and Reply Slip

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Humanities 100.
1919 - 2019
Centre for Augmentative & Alternative Communication

Appendix B

For official use
Participant no:

Hospital Manager Consent Letter
Hospital Manager Name
Hospital Name
Address

Dear (Insert Hospital Manager Name)

My name is Lara Bentley. I am currently enrolled for a Master's degree in Augmentative and Alternative Communication (AAC) at the University of Pretoria. The title of my study is: *Perceptions about language development of isiXhosa speaking caregivers of children receiving speech-language therapy in the Eastern Cape.*

I have been granted by permission by the Eastern Cape Department of Health to approach your hospital in order to carry out the above research. Please see attached copy of this permission letter.
I would be much obliged if you would permit me to include (name of hospital) in this study.

Rationale for the study

In order to better support families of children who require language intervention, it is important to understand how caregivers of these children perceive their child's language development and the role they play in the language development process. Due to the close relationship between language and culture and the fact that most research on the topic has been conducted in Western contexts, it is important to understand the perceptions of caregivers from different cultural and linguistic backgrounds.

What will be expected of the hospital?

I will require the help of the speech therapists to nominate thirty (30) caregivers and their children who could possibly participate in the study. The therapists will be asked to identify clients on their caseload who meet the inclusion criteria for the study. The caregivers will be contacted telephonically in order to obtain consent and to discuss a suitable meeting time. The data collection, which will involve a caregiver questionnaire, a brief assessment and a short video-recorded caregiver child-interaction, will take place in the speech therapy

Fakulteit Geesteswetenskappe
Lefapha la Bomotho

Centre for Augmentative and Alternative Communication, Room 2-36, Corn path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100841
Email saak@up.ac.za
www.caac.up.ac.za

department at the hospital but will not interfere with the normal routine/ schedule of the department. Data collection is expected to take 4-5 days.

What will be expected of the caregivers and children who participate in the study?

- Caregivers and children who meet the criteria will be contacted telephonically to discuss and finalise a suitable meeting time.
- The caregivers will be asked to come to the speech therapy department with their child on the agreed upon date. Transport costs will be reimbursed.
- The caregivers will be asked to complete a questionnaire about their child's language development and then to interact with their child for a period of ten minutes.
- Thereafter, the researcher will assess the child in order to obtain scores for the child's language ability (understanding and use). The data collection process should not take longer than 60 minutes per caregiver-child dyad.

The following ethical principles will be upheld within this study:

- Permission has been obtained from the Department of Health in the Eastern Cape (please find attached).
- Written consent from the caregivers will be obtained prior to conducting data collection. Child assent will also be obtained.
- All participants will be made aware of their right to withdraw from the study at any point in time without any negative consequences to themselves.
- The recordings, which will be made during the data collection process, will be accessed only be the researcher, her supervisor and the research assistants.
- All information will be kept confidential from those external to the study. Any identifying information will be removed from the data collection forms/ recordings. No individual names or the name of the hospital will be mentioned in any published data.

Who will have access to the results of the study?

The research will be stored in both hard copy and in electronic format at the University of Pretoria in the Centre for Augmentative and Alternative Communication for 15 years. The data obtained from the research will be used for writing a Master's dissertation, writing scientific papers and for presentation at professional conferences and seminars. A summary of the results will be made available for any interested staff or caregivers.

The data obtained from the questionnaire and assessment protocol (from which all identifying information has been removed) may be used for secondary data analysis. Video recordings will only be used for further analysis if consent from the caregivers has been obtained again.

What are the risks and benefits?

At no time during the participation in the research will the caregivers or their children be at risk of any harm. The children will not miss out on their regular therapy sessions by participating in this research. Potential benefits of this study may include extending research within the language intervention field and may help to guide speech therapists' practice when providing language intervention to young children and their caregivers who come from isiXhosa-speaking homes.

Please feel free to contact me or my supervisor if you have any questions about this study. I look forward to receiving your response.

Kind regards,

Lara Bentley **Date**
Email [redacted]
Cell: [redacted]

Date

Professor Juan Bornman
Centre for Augmentative and Alternative Communication
Email:juan.bornman@up.ac.za
Office tel: 012 420 2001

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities

HOSPITAL MANAGER PERMISSION: REPLY SLIP

Name of Hospital Manager: [redacted]

Project title: Perceptions about language development of isiXhosa-speaking caregivers of children receiving speech-language therapy in the Eastern Cape, South Africa.

Researcher: Lara Bentley
Master's student
Centre for AAC
Cell: [redacted]

Supervisor: Prof. Juan Bornman

I, [redacted]
Name and surname

(Please tick box that applies)

☒ Give permission for Lara Bentley to access participants through the speech therapy department of the hospital and to make use of a room in the department in order to collect the data for the study entitled: "Perceptions about language development of isiXhosa-speaking caregivers of children receiving speech-language therapy in the Eastern Cape, South Africa." The study will be conducted by Lara Bentley under the supervision of Prof. Juan Bornman. This permission is voluntary and I understand that the data will be stored for 15 years at the CAAC and that all data will be treated with confidentiality. I understand that the data may be reused for analysis.

OR

☐ Do not give permission for Lara Bentley to access participants through the speech therapy department at the hospital and to make use of a room in the department in order to collect the data for the study entitled: "Perceptions about language development of isiXhosa-speaking caregivers of children receiving speech-language therapy in the Eastern Cape, South Africa."

Hospital ma[redacted]

28/11/19
Date

Hospital stamp

Fakulteit Geesteswetenskappe
Lefapha la Bomotho

Centre for Augmentative and Alternative Communication, Room 2-36, Com path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100841
E-mail sadk@up.ac.za
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Appendix D

Speech-language Therapist Consent Letter and Reply Slip

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Appendix C

Speech-Language Therapist Consent Letter

For official use
Participant no:

Dear Sir/ Madam

PARTICIPATION IN A RESEARCH STUDY

My name is Lara Bentley. I am a student at the University of Pretoria and I am currently enrolled for a Master's degree in Augmentative and Alternative Communication (AAC) at the Centre for AAC at the University of Pretoria. I would like to request your assistance with my research.

The title of my study is: *Perceptions about language development of isiXhosa-speaking caregivers of children receiving speech-language therapy in the Eastern Cape, South Africa.* One of the main aims of the study is to find out how caregivers of isiXhosa children perceive their child's language skills.

Why is this study important?

In order to better support families of children who require language intervention, it is important to understand how caregivers of these children perceive their child's language development and the role they play in the language development process. This is particularly important when one considers the close relationship between language and culture and the fact that most of the literature on language intervention has been undertaken in Western contexts. For these reasons, it is important researchers and therapists begin to understand the perceptions of caregivers from different cultural and linguistic backgrounds.

What is expected of me?

Should you give consent to participate in the study, the following will be expected of you:

- You will be asked to identify children on your caseload who meet the inclusion criteria for participation in this study.
- You will be requested to, on permission of the caregiver, provide the name and contact number of the caregiver so that the researcher may contact them.

Fakulteit Geesteswetenskappe
Lefapha la Bomotho

Centre for Augmentative and Alternative Communication, Room 2-36, Com path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100841
Email saak@up.ac.za
www.caac.up.ac.za

What are my rights?

Participation in the research is voluntary. You may withdraw from the study at any point in time and all data that you provided will be immediately destroyed.

Who will have access to the results of the study?

The research will be stored as both hard copy and in electronic format at the University of Pretoria in the Centre for AAC for 15 years. The data obtained from the research will be used for teaching, research and writing a scientific paper. All results will be made available for any interested staff or caregivers. However, the identity of the caregivers and children you refer to the study will not be revealed.

What are the risks and benefits?

There are no risks involved in participation in this study. The caregivers who consent to participate in the study will be reimbursed for travel cost to and from the hospital. Potential benefits of the study may include improving the knowledge regarding language intervention with isiXhosa-speaking children that may help therapists to understand how to improve intervention and support offered to families of children with language difficulties.

I would appreciate your consideration of my request and should you like to help me with this study, please sign the attached reply slip. For any further information, please contact me on the contact details below.
Kind regards

Lara Bentley
Email: [redacted]
Cell: 08[redacted]

Date:

Professor Juan Bornman
Centre for Augmentative and Alternative Communication
Email:juan.bornman@up.ac.za
Office tel: 012 420 2001

Date:

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SLT permission: Reply slip

Name of SLT: [redacted]

Project title: Perceptions about language development of isiXhosa-speaking caregivers of young children receiving speech-language therapy in the Eastern Cape, South Africa.

Researcher: Lara Bentley
Master's student
Centre for AAC
Cell: [redacted]

Supervisor: Prof Juan Bornman

I, [redacted]
Name and surname

(Please tick box that applies)

☑ Give permission for Lara Bentley to contact the caregivers that I refer to the study entitled: "*Perceptions about language development of isiXhosa-speaking caregivers of children receiving speech-language therapy in the Eastern Cape, South Africa.*" The study will be conducted by Lara Bentley under the supervision of Prof. Juan Bornman. This permission is voluntary and I understand that the data will be stored for 15 years at the CAAC and that all data will be treated with confidentiality. I understand that the data may be reused for analysis.

OR

☐ Do not give permission for Lara Bentley to contact the caregivers of children on my caseload in order to request their participation in the study entitled: Perceptions about language development of isiXhosa-speaking caregivers of children receiving speech-language therapy in the Eastern Cape, South Africa.

SLT signature: [redacted] Date: 04/04/2019

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Lefapha la Bomotho

Centre for Augmentative and Alternative Communication, Room 2-36, Corn path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100641
Email saak@up.ac.za
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Appendix E

Speech-language Therapist Referral Letter

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Appendix D

For official use
Participant no:

SLT Referral Letter

Identification of participants to the study entitled: Caregivers' perceptions about language development of young isiXhosa-speaking caregivers in the Eastern Cape province of South Africa.

Please assist me with the identification of potential participants for the study based on the following selection criteria:

	The child is between the age of 30 months (2.5 years) and 72 months (6 years).
	The child's primary caregiver speaks isiXhosa as his/ her first language.
	The child is receiving therapy for difficulties related to language development as part of their treatment plan (i.e. no pure speech difficulties).
	The child is accompanied to therapy by a primary caregiver.

Name of caregiver: [redacted]

Name of child: [redacted]

Child's date of birth: 10/07/2014

Name of SLT: [redacted]

Contact number/s of caregiver: [redacted]

R40

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University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100841
Email saak@up.ac.za
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✓ Appointment made.
24/4/19.

Appendix F1

Participant Consent Letter and Reply Slip

(English version)

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For official use
Participant no:

May 2019

Dear Sir/ Madam

PARTICIPATION IN A RESEARCH STUDY

My name is Lara Bentley. I am a student at the University of Pretoria and I am currently enrolled for a Master's degree in Augmentative and Alternative Communication (AAC) at the Centre for AAC at the University of Pretoria. I would like to request your participation in a research study.

The title of my study is: *Perceptions about language development of isiXhosa-speaking caregivers of young children receiving speech-language therapy in the Eastern Cape, South Africa*. One of the main aims of the study is to find out how isiXhosa caregivers view their child's language skills.

Why is this study important?

In order to help support families of children who need help with language skills, we need to understand how the people who look after them feel about their skills. The language spoken most often in the Eastern Cape is isiXhosa and so it is important to understand how we can best support children and their families who speak isiXhosa as their home language.

What is expected of my child and I?

Should you give consent to participate in the study, the following will be expected of you:

- You will be asked to complete a form, which will provide the researcher with some basic information about you and your child.
- You will be asked to complete a questionnaire with the researcher about your child's language skills.
- You will be asked to take part in a 10-minute play interaction with your child that will be video-recorded and observed later.
- Your child will undergo a short language assessment, which will help us to get an indication of his/her current language skills.

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Centre for Augmentative and Alternative Communication, Room 2-36, Com path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100841
Email saak@up.ac.za
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What are my rights?

Participation in the research is voluntary. You may withdraw from the study at any point in time and all data pertaining to you or your child will be immediately destroyed.

All data pertaining to you or your child will be kept strictly confidential. The video-recordings of the interaction will only be watched by myself, my supervisor and two research assistants.

Who will have access to the results of the study?

The research will be stored as both hard copy and in electronic format at the University of Pretoria in the Centre for AAC for 15 years. The data obtained from the research will be used for teaching, research and writing a scientific paper. All results will be made available for any interested staff or caregivers. However, your or your child's identity will never be revealed.

What are the risks and benefits?

At no time during the participation will you or your child be at risk of any harm. You will be reimbursed for your travel cost to and from the hospital on the day of data collection. Potential benefits of the study may include improving the knowledge regarding language intervention in isiXhosa-speaking children that may help to understand how to improve intervention and support offered to families of children with language difficulties.

I would appreciate your consideration of my request and should you like to help me with this study, please sign the attached reply slip. For any further information, please contact me on the contact details below.

Kind regards

Lara Bentley **Date:**
Email: [redacted]
Cell: 0

Professor Juan Bornman **Date:**
Centre for Augmentative and Alternative Communication
Email:juan.bornman@up.ac.za
Office tel: 012 420 2001

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Participant Informed Consent- Reply Slip

Name: [redacted]

Name of the study: Perceptions about language development of isiXhosa-speaking caregivers of young children receiving speech-language therapy in the Eastern Cape, South Africa.

Researcher: Lara Bentley

	Did someone read the letter about the study to you? (Yes) No
	Did you understand the letter that was read to you? (Yes) No
	Do you understand you can choose to do this? (Yes) No

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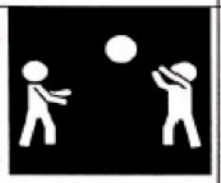
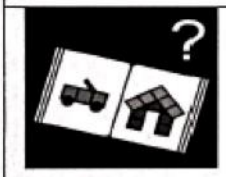
	Do you understand you can stop when you want to? (Yes) No
	Will you complete the questionnaire about how you think about your child's language? (Yes) No
	Will you play with your child for 10 minutes and allow the researcher to record this? (Yes) No
	Will you allow the researcher and her assistant to assess your child's language skills? (Yes) No
	Do you have any questions? Yes (No)
	Are you happy with the way your questions were answered? Yes No
(Yes)	Do you want to be part of the study? No

[redacted]

Appendix F2

Participant Consent Letter and Reply Slip

(isiXhosa version)

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For official use
Participant no:

April/ May 2019

Mnumzana/Nkosikazi obekekileyo

Ukuthatha inxaxheba kwisifundo sophando

Igama lam ngu Lara Bentley. Ndingumfundi kwiyunivesi yase Pitoli kwaye ngoku ndibhaliswe kwiqondo lweMaster's degree kwiAugmentative and alternative communication (AAC) kwiziko lwayo kwiyunivesi yasePitoli. Ndingathanda ucela ukuba uthathe inxaxheba kwisifundo sophando.

Isihloko sesifundo sam sophando sithi: Imbono malunga nokuphuhliswa kolwimi lwesiXhosa sabantu abakhathathelela abantwana abafumana ukungenelelo kolwimi ngolwimi lwaseMpuma Koloni, eMzantsi Afrika. Enye yeenjongo eziphambili zoluphando kukufumana iingcingo zabantu abakhathalela abantwana abathetha IsiXhosa malunga nezakhono/ ngolwimi lwabo.

Lubaluleke ngantoni oluphando?

Ukwenzela ukuncedisa nenxaso zeentsapho zabantwana abafuna uncedo ngolwazi lweelwimi, kufuneka siqonde indlela abantu abajongayo abavakalelwa ngayo ngezakhono zabo. Ulwimi oluthethwayo rhoqo entshona koloni sisiXhosa, kwaye ke kubalulekile ukuqonda indlela esinokuxhasa ngayo abantwana kunye neentsapho zabo abathetha isiXhosa njengolwimi abalafunde kuqala.

Yintoni elindelweyo kum nomntana wam?

Ukuba uyayinika imvume yokuthatha inxaxheba kwisifundo, oku kulandelwayo kulindeleke kuwe:

- Uya kucelwa ukuba uzalise ifomu ezakuchazela umphandi ngeenkukaca zakho ezimbalwa kunye nezomntwana wakho.
- Uya kucelwa ugcwalise i-questionnaire kunye nomphandi ngezakhono zolwimi lomntwana.
- Uza kucelwa ukuba udlale nomntwana imizuzu elishumi umphandi ayivideorayize. Ize kugcinwa ibukelwe ngelinye ixesha.

Fakulteit Geesteswetenskappe
Lefapha la Bomotho

Centre for Augmentative and Alternative Communication, Room 2-36, Com path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100841
Email saak@up.ac.za
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- Uwimi lomntwana wakho liza kuhlolwa ngancinci ukuze umphandi aqonde ulwimi lwakhe lume ndawoni.

Athini amalungelo am?

Ukuthatha inxaxheba kuphando kukuzithandela. Unokurhoxisa kwesisifundo nanini na kwaye yonke idatha edibene nomntana wakho iya kutshatyalaliswa kwa ngoko.

Yonke idatha edibene nawe okanye nomntana wakho iya kugcinwa ngokuyimfihlo. Ividiyo erikhodiweyo yentsebenziswano yendlalo wam kunye nabanye abaphandi ababini iyakubukelwa ndim, ngumphathi.

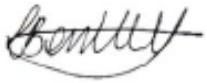
Ngubani onokufikelela kwiziphumo zovavanyo?

Uphando luya kugcinwa njengekopi ekhuni kunye nefomathi yekhomyutha uyunivesi yasePitoli kwiziko Iwe AAC iminyaka elishumi nantlanu. Idatha efunyenweyo koluphando iya kusetyenziswa ukufundisa, uphando kunye nokubhala iphepha lophando lezesayensi. Zonke iziphumo ziya kufumaneka kwasebenzi abanomdla, nangona ubunikazi bakho okanye obomntana akuyi kubonakaliswa.

Zeziphi iingozi kunye nezibonelelo?

Ngexesha lokuthatha inxaxheba awunaze ubekwe engciphekweni yengozi. Uya kuhlawulelwa ngokuhamba usiya esibhedlele ngalomhla woqokelelo. Izibonelelo ezinokuthi zifundwe zingabandakanya ukuphucula ulwazi malunga nokungenelela kolwimi kwabantwana abathetha isiXhosa kwaye inokunceda ukuqonda indlela yokuphucula ukungenelela nenxaso enikezelwa kwiintsapho zabantwana abaneengxaki zolwimi
Ndiya kuxabisa ukuqwalaselwa kwesicelo sam, kwaye ukuba uye wathanda ukundinceda koluphando ndeca usayine eliphetshana lempendulo.
Ukuba ufuna ulwazi olungakumbi, nceda uqhagamshelane nam kwiinkcukaca zoqhagamshelwano ezingezantsi.

Ozithobileyo



Lara Bentley **Umhla:**
Email: bentleylara@gmail.com
Cell: 082 0568499

Professor Juan Bornman **Umhla:**
Centre for Augmentative and Alternative Communication
Email:juan.bornman@up.ac.za
Office tel: 012 420 2001

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Participant Informed Consent- Reply Slip

Igama: _____

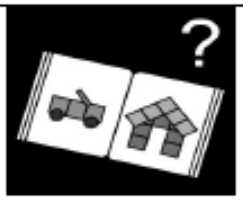
Igama lophando: Ufundo lokuzama ukuphuhlisa ulwimi lwesi Xhosa phakathi komntana kunye nomzali eMpuma Koloni.

Umphandi: Lara Bentley

	Ukhona umntu okufundeleyo incwadi yoluphando? Ewe Hayi
	Uye wacacelwa ngalencwadi ubuyifundelwa? Ewe Hayi
	Ucacelwe ukuba awunyanzelekanga ulenze oluvavanyo? Ewe Hayi

Fakulteit Geesteswetenskappe
Lefapha la Bomotho

Centre for Augmentative and Alternative Communication, Room 2-36, Com path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100841
Email saak@up.ac.za
www.caac.up.ac.za

	Ucacelwe ukuba ungaluyeka oluvavanyo xa uthanda? Ewe Hayi
	Ungakwazi ukuphendula imibuzo emalunga nolwimi lomntana wakho? Ewe Hayi
	Ungasivumela sikubukele udlala nomntana wakho imizuzu elishumi? Ewe Hayi
	Uyamvumela umphandi kunye nomncedisi wakhe bavavanye ulwimi lomtana wakho? Ewe Hayi
	Ikhona imibuzo onayo? Ewe Hayi
	Wanelisekile ngendlela imibuzo yakho ethe yaphendulwa ngayo? Ewe Hayi
	Uyafuna ukuba yinxalenye yoluphando? Ewe Hayi

Appendix G1

Child Assent Letter and Reply Slip

(English version)

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Child Assent Letter

Hello! My name is Lara.
I want to ask you to help me today.

I will ask you to play with me and your mother/ father/ aunt/ grandmother/ nanny (as applicable).

You can stop at any time

WILL YOU HELP ME TODAY?

Fakulteit Geesteswetenskappe
Lefapha la Bomotho

Centre for Augmentative and Alternative Communication, Room 2-36, Com path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100841
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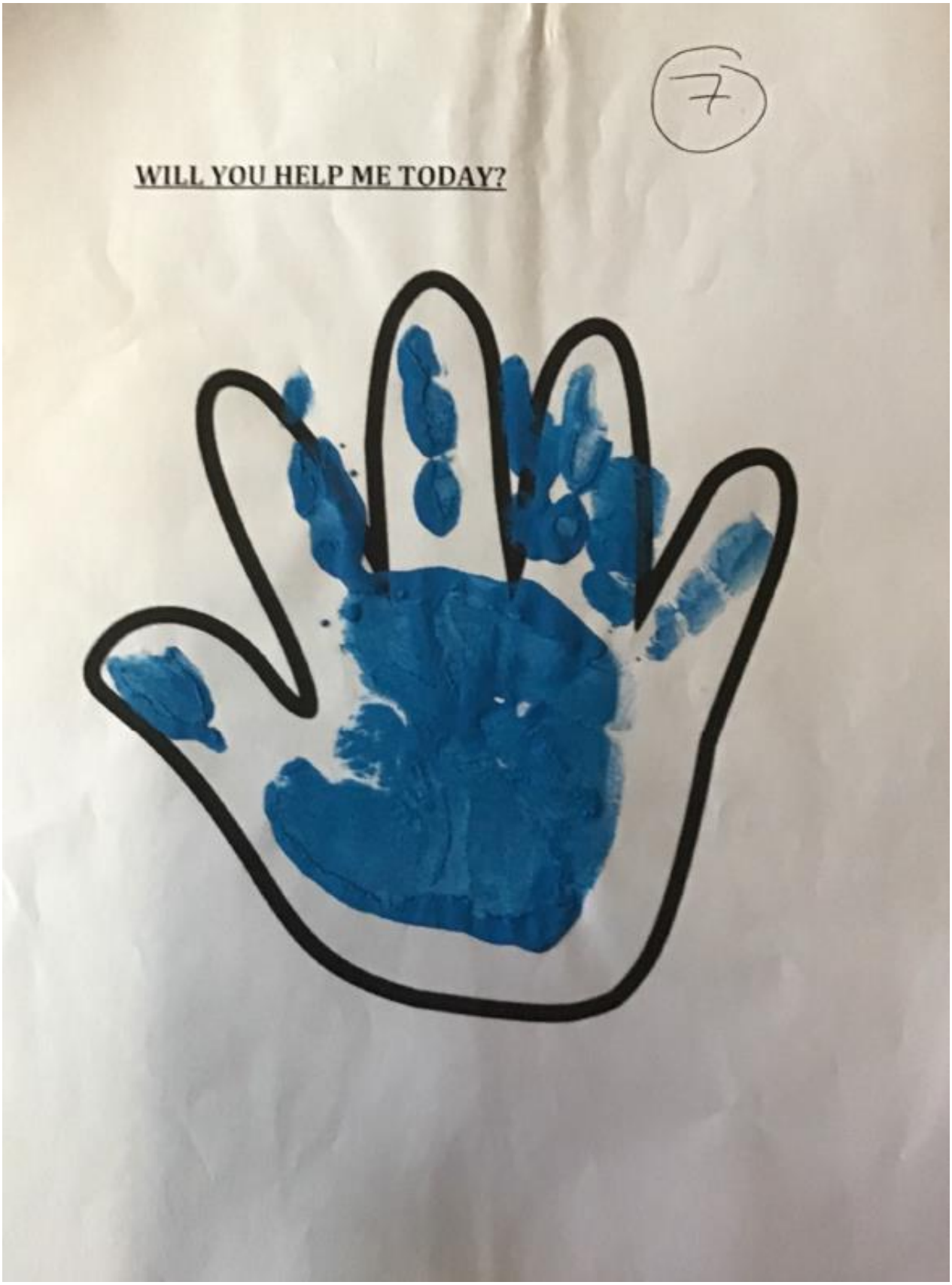
7
WILL YOU HELP ME TODAY?

Appendix G2

Child Assent Letter and Reply Slip

(IsiXhosa version)

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Incwadi yokuvuma yomntwana

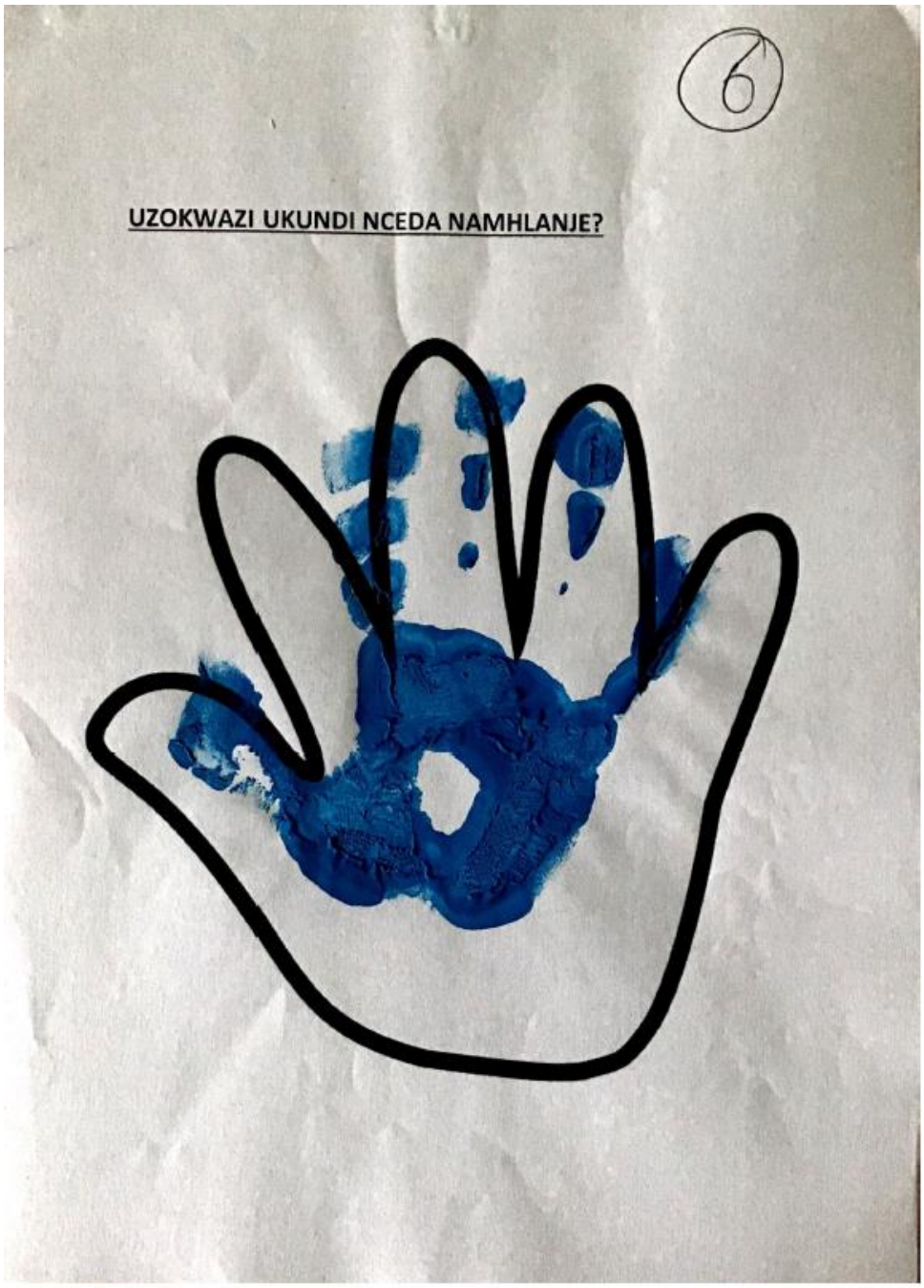
Molo! Igama lam nguLara. Ndizakucela undincede namhlanje.

Ndiza kucela udlale nam nomama wakho / utata wakho / umakazi wakho / uauntie wakho (lo ukhoyo nawe).

Singayeka Nanini na.

UZOKWAZI UKUNDI NCEDA NAMHLANJE?

Centre for Augmentative and Alternative Communication, Room 2-36, Com path Building, Lynnwood Road
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2001
Fax +27 (0) 86 5100841
Email saak@up.ac.za
wwwcaac.up.ac.za


6
UZOKWAZI UKUNDI NCEDA NAMHLANJE?

Appendix H1

Participant Biographical Questionnaire

(English version)

For official use

Participant Biographical Questionnaire

Participant no:

Name of caregiver:	
Name of child:	
First language of caregiver:	
First language of child:	
Caregiver date of birth:	
Child date of birth:	
Please provide your child's medical diagnosis (if any)	
What is your relationship to the child? (e.g. mother, grandmother etc.).	
When did your child begin attending speech-language therapy? (e.g. August 2017).	
How many children are there in the household?	
What number is this child in birth order?	1st | 2nd | 3rd | 4th | Other If other, please specify: _____

How often does your child attend therapy? (Please mark with an X)

1 x per week	
2 x per month	
1 x per month	
Other (if so, please specify)	

My child attends therapy: (please mark with an X).

Individually	
In a group	

Appendix H2

Participant Biographical Questionnaire

(isiXhosa version)

For official use

Participant no:

Participant Biographical Questionnaire

Igama lomntu ogcina umntwana:	
Igama lomntwana:	
Ulwimi lokuqala lomgcini:	
Ulwimi lokuqala lomntwana :	
Usuku lokuzalwa lomgcini:	
Usuku lokuzalwa lomntwana:	
Ndicela ubhale izigulo zomntwana wakho. (ukuba unazo)	
Uzalana njani nomntwana? (umz. UMama, umakhulu, njalonjolo.)	
Umntwana wakho uqalise Nini ukubona Ispeech Therapy? (Umz 12 EyoMsintsi 2019).	
Bangaphi abantwana ekhaya?	
Ungowesingaphi umntwana wakho kubantwana ekhaya?	Ungowokuqala | Ungowesibini | Ungowesithathu | Ungowesine | Elinye inani Ukuba ukwi Nani elingaphezuli, bhala apha:

Umntwana wakho usihamba kangaphi iSpeech Therapy?(phendula ngoku bhala u- X).

Uhamba kanye ngeveki	
Uhamba Kabini ngenyanga	
Uhamba kanye ngenyanga	
Enye/amanye amaxesha (zichaze ezontsuku)	

Umntwana uhamba iSpeech Therapy: (phendula ngoku bhala u- X).

Yedwa	
Nabanye abantu	

Appendix I1

SA-CPOLD Questionnaire

(English version)

South African Caregiver Perceptions of Language Development
SA-CPOLD

Structured interview to determine care giver's perception of child's communication skills

I want to find out more about how your child talks and understands. I will read a sentence for you and I want you to tell me if you agree or not by showing me on these numbers. This is what the numbers mean:

Scale
1=strongly disagree/definitely not
2=disagree/don't think so
3=undecided/unsure
4=agree/I think so
5=strongly agree/definitely yes
My
We will first practice how to do this.

Training items

		Rating				
	Statement	1	2	3	4	5
T1	My child likes eating ice cream.					
T2	My child is not allowed to play with live snakes at home.					

Now let's talk about the way your child talks and understands. If something is not applicable to your child you can tell me, and we will skip that sentence.

Items

		Rating				
	Statement	1	2	3	4	5
1	My child can tell me what he/she wants in a way that I can easily understand.					
2	My child has a desire to communicate with me / My child tries to speak to me.					
3	I am worried about my child's ability to talk and say words					
4	My child can talk as well as other children his/her age.					
5	I feel my child needs extra help so that he/she can communicate better.					
6	My child can understand things that we say to him/her as well as other children of his/her age.					
7	My child is naughty because he/she cannot tell me what he/she wants.					

		Rating				
	Statement	1	2	3	4	5
8a	My child and I have found ways to talk to each other that work very well for us					
8b	My child and I have found ways to understand each other that work very well for us					
9	Because my child cannot talk properly, he/she struggles to tell me what he/she wants or needs					
10a	I feel confident that I can help my child talk better.					
10b	I feel confident that I can help my child understand language better.					
11	My child is slow to talk because he/she is slow with everything, like walking and learning.					
12	Even though my child is slower to talk than other children, he/she will catch up eventually.					
13a	Speech therapy (at the hospital) has helped me and my child to talk better.					
13b	Speech therapy (at the hospital) has helped me and my child to understand language better.					

Appendix I2

SA-CPOLD Questionnaire

(isiXhosa version)

South African Caregiver Perceptions of Language Development
SA-CPOLD

Udliwano-ndlebe ukucacisa indlela umgcini azijonga ngayo izakhono zonxibelelwano zomntwana.

Ndifuna ukufumana ngakumbi malunga nendlela umntwana athetha ngayo kwaye aqonda ngayo. Ndiza kufunda isivakalisi kwaye ndifuna undixelele ukuba uyavuma okanye awuvumi ngondibonisa kula manani. Lamanani athetha ukuthi:

Isixa

1=Andivumelani ngamandla

2=Andivumi

3=Andiqiniseki

4=Ndiyavuma

5=Ndiyavumelelana ngamandla

Sizaqala sifunde indlela yokwenza

Izinto zokuqeqesha

		Ukulinganisa				
	Ingxelo	1	2	3	4	5
T1	Umntwana wam uyathanda ukutya i-ice cream.					
T2	Umntwana wam akavumelekanga ukuba adlale ngeenyoka eziphilayo ekhaya.					

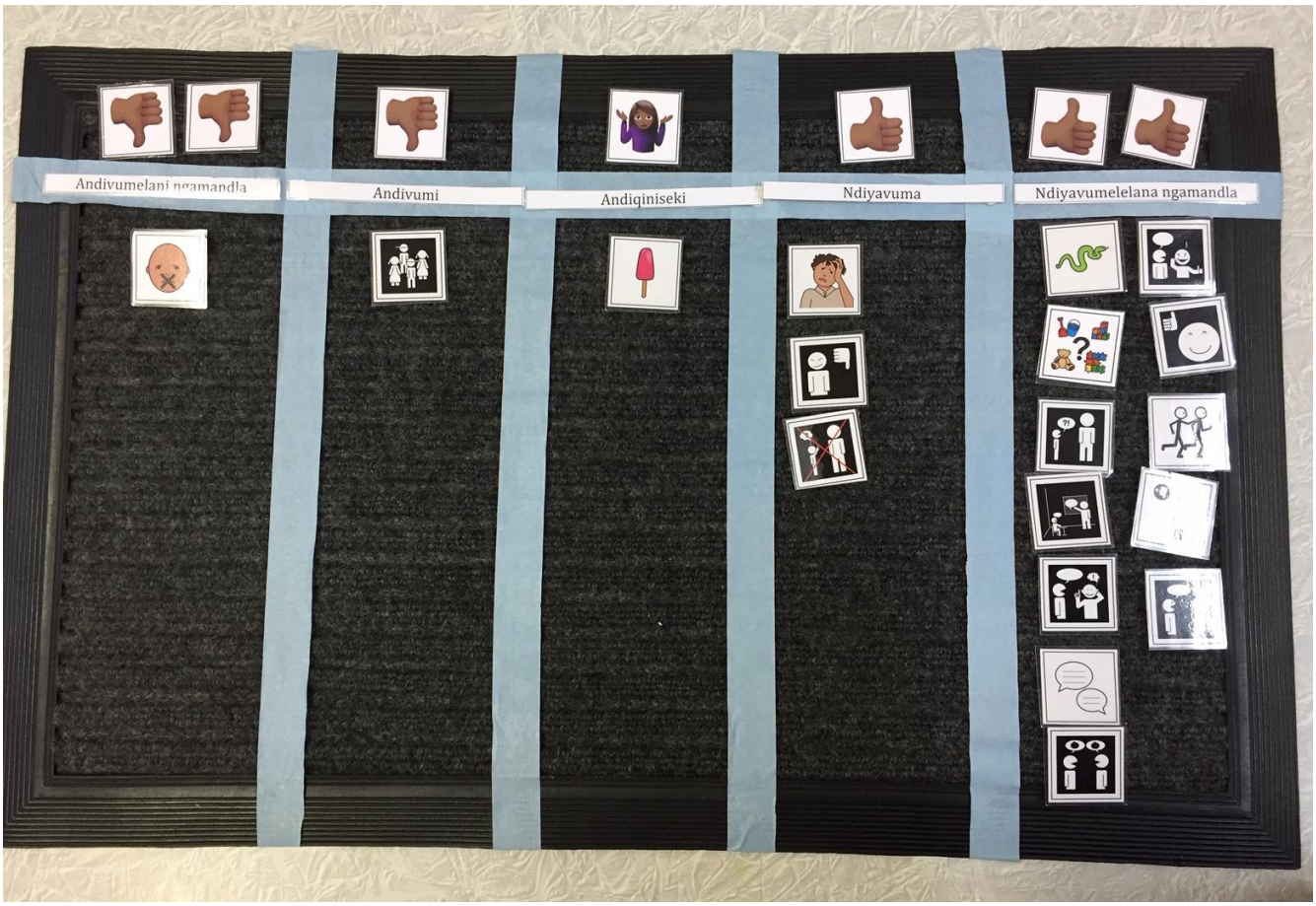
Masixoxe ngendlela umntwana wakho athetha kwaye aqonda ngayo. Ukuba into ayimfanelanga umntwana wakho, ungandixelela ukuze sisitsibe eso sivakalisi.

Izinto

		Ukulinganisa				
	Ingxelo	1	2	3	4	5
1	Umntwana wam uyakwazi undixelela into ayifunayo ngendlela endiyivisisayo lula.					
2	Umntwana wam uyabawela uthetha nam/Umntwana wam uyazama ukuthetha nam.					
3	Ndinexhala ngomntwana wam ngokukwazi ukuthetha nokuwatsho amagama.					
4	Umtwana wam uthetha njengabanye abantwana abalingana naye.					
5	Ndiziva ukuba umntwana wam uncedo olongezelelweyo ukuze akwazi ukuthetha kakuhle.					
6	Umntwana wam unokuqonda izinto esizithethayo kuye njengabanye abantwana abalingana naye.					
7	Umntwana wam uyageza kuba engakwazi ukundixelela ukuba ufuna nton.					
8a	Mna nomntwana wam sifumene iindlela zokuthetha kwaye sivane ezisisebenzelayo kakuhle.					
8b	Mna nomtwana wam sifumene iindlela zoqondana ezisisebenzelayo kakuhle.					
9	Kuba umntwana wam engakwazi ukuthetha kakuhle, uyanzinyelwa ekundichazeleni ukuba ufuna ntoni.					
10a	Ndiziva ndiqinisekile ukuba ndiyakwazi umnceda umntwana wam athethe ngcono.					
10b	Ndiziva ndiqinisekile ukuba ndiyakwazi umnceda umntwana wam aqonde ulwimi ngcono.					
11	Umntwana wam uyacothisisa ukuthetha kuba echothisisa nakwezinye izinto, umzekelo ukuhamba nokufunda.					
12	Nangona umntwana wam ecotha ekufundeni uthetha xa ndimfanisa nabanye abantwana, uzofikelela kwizinga labo.					
13a	Ukufunda uthetha (esibhedlele) kusincedile, mna kunye nomntana wam ukuba athethe ngcono.					
13b	Ukufunda uthetha (esibhedlele) kundincedile, mna kunye nomntana wam ukuba alive ulwimi ngcono.					

Appendix J

Example of Completed SA-CPOLD Questionnaire in Talking Mat™ Format


Andivumelani ngamandla
Andivumi
Andiqiniseki
Ndiyavuma
Ndiyavumelelana ngamandla

Appendix K

Expressive Language Group Observation Checklist

Expressive Language group observation checklist

Participant number:

Number of intelligible spontaneous words:	
Number of turns (child)	
Mean length of utterance:	
Score on MSEL expressive Language subtest:	

	Group 1: not speaking	**Group 2: speaking in single words and phrases**	**Group 3: speaking in sentences**
Number of intelligible words	Vocalisations and less than 10 intelligible words	10-20 spontaneous intelligible words	21+ spontaneous intelligible words
MLUW	Less than 1	1-2.9 words	3+
Score on MSEL EL subscale	Less than or equal to 20 (Raw score)	21-30	31+

Group placement: