

Parent perspectives of the language development and services offered to their children
with Down syndrome

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Dedication

This project is dedicated to the families of children with Down syndrome. Your love for them and your dedication to their growth and development is truly inspiring.

Abstract

The language abilities of 99 children with Down syndrome and the speech and language services that these children receive were assessed using a parental survey. The survey addressed both the child's current abilities and services based on their stage of language development as well as the services they received in previous stages of language development. Differences in language abilities were observed based on the child's stage of language development, but not the child's chronological age. Differences in the type of speech-language services received and parents' perceptions of the benefits of language services provided were also observed based on the child's language stage and chronological age. Overall, parents considered language services to be beneficial to their child's communication abilities; however, some parents noted concerns regarding their child's language treatment despite their general satisfaction with these services. Findings from this study should be used to guide the clinical services offered to children with Down syndrome as well as research efforts aimed to improve language interventions for children with Down syndrome.

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Down syndrome results from the presence of an extra copy of chromosome 21. Also known as Trisomy 21, Down syndrome is prevalent in approximately 12 out of 10,000 live births in the United States (Shin et al., 2009). It is the leading genetic cause of intellectual disability. One significant area of weakness for almost all children with Down syndrome beginning at an early age is speech and language development (Chapman & Hesketh, 2000). There are a variety of intervention programs available for individuals with Down syndrome throughout the lifespan that focus on speech and language skills, such as the development of first words, phonological awareness, morphology, syntax, and narrative use (Barker & Romski, 2009; Fey et al., 2006; van Bysterveldt, Gillon, & Foster-Cohen, 2010). Although investigators have examined the speech and language profiles of children with Down syndrome as well as intervention outcomes (Barker & Romski, 2009; Berglund, Eriksson, & Johansson, 2001; Martin, Klusek, Estigarribia, & Roberts, 2009), the perspectives of parents of children with Down syndrome is necessary to provide a more complete view of the communicative needs of children with Down syndrome.

This study aims to examine parental perspectives of the speech and language abilities of their child with Down syndrome and the speech-language interventions their child has received. The following review includes a summary of factors significantly contributing to the language development of individuals with Down syndrome. This is followed by a summary of what is currently known about the language abilities of children and adolescents with Down syndrome as well as relevant language interventions that have been developed for this population. The review is presented in a developmental

sequence, which includes the prelinguistic stage, preschool/school-age stage, and the adolescent stage.

Factors Influencing Speech and Language Development

Throughout development, speech and language weaknesses of individuals with Down syndrome are influenced by physical features, hearing abilities, and cognitive abilities. The physical features associated with Down syndrome may include a flat face, a large tongue, a short neck, small ears, and/or poor muscle tone. These particular features frequently have a negative impact on speech development and intelligibility (Roberts, Price, & Malkin, 2007). Other factors that influence the intelligibility of children with Down syndrome are increased speech rate, decreased loudness, fluency, resonance, and articulation errors that are often attributed to poor muscle coordination and difficulties with motor planning (Kumin, 1994). The articulation errors made by children with Down syndrome resemble the errors of younger children with typical development (Rosin, Swift, Bless, & Kluppel Vetter, 1988). These errors, however, tend to be made for a longer period of time and with more variability than the articulation errors made by children with typical development (Chapman & Hesketh, 2001). Difficulties with speech intelligibility frequently persist through adolescence and negatively influence the perceived language skills of individuals with Down syndrome, particularly as syntax becomes more complex (Bray & Woolnough, 1988; Rosin, et al., 1988).

Approximately two-thirds of children with Down syndrome have either a conductive or sensorineural hearing loss (Roizen, Wolters, Nicol, & Blondis, 1993). Otitis media is also prevalent in children with Down syndrome due to the narrow auditory

canals and craniofacial differences associated with Down syndrome (Roizen & Patterson, 2003). These factors negatively influence language development, particularly the acquisition of words and grammatical morphemes (Roberts, Price, et al., 2007). In order for children with Down syndrome who have hearing loss to acquire language, amplification is often necessary to ensure that they are receiving as much auditory input as possible. Hearing aids and sound-field amplification have been found to be successful in providing satisfactory amplification for children with Down syndrome who experience hearing loss (Bennetts & Flynn, 2002; McDermott, Williams, Kuo, Reid, & Proops, 2008).

Cognitive skills of children with Down syndrome develop in a similar sequence as that of children with typical development; however, this development tends to be delayed (Chapman & Hesketh, 2000). Martin, et al. (2009) reported that approximately 80% of individuals with Down syndrome have moderate intellectual disability. Research also indicates that individuals with Down syndrome have full-scale intelligence quotient (IQ) scores ranging from 30 to 70, which demonstrates a significant amount of variability in the cognitive development among individuals in this group (Chapman & Hesketh, 2000). Cognitive impairments, including deficits in short-term and working memory are associated with weaknesses in expressive language, particularly the acquisition of words and syntax (Chapman & Hesketh, 2001).

Prelinguistic and Early Word Development

The prelinguistic stage of language development is defined as the period of time before individuals use a linguistic system to communicate (Wetherby, 1998). This stage

is typically characterized by the use of joint attention, nonverbal vocalizations, and/or gestures to communicate. These pre-word communicative acts are important precursors to later language development (Watt, Wetherby, & Shumway, 2006). For children with typical development, the prelinguistic period occurs within the first 12 to 18 months of life. Prelinguistic abilities have been found to develop at similar rates in both children with typical development and children with Down syndrome; however, children with Down syndrome tend to use prelinguistic communication less frequently and for a longer period of time (Martin, et al., 2009).

The development of joint attention involves a child's ability to follow a communicative partner's gaze towards a referent as well as the child's ability to point or show a referent to their communicative partner (Watt, et al., 2006). Joint attention typically develops in children between 6 and 18 months of age. A child's ability to engage in joint attention is an important precursor to the development of social communication skills (Abbeduto, Warren, & Conners, 2007) and helps to predict later language outcomes (Martin, et al., 2009). Therefore, if joint attention is developed later, other language skills that are influenced by this skill, such as pragmatic communication, may be delayed as well.

Nonlinguistic vocalizations, commonly referred to as babbling, are speech-like sounds that may be single vowels sounds or vowel-consonant combinations. For children with typical development these vocalizations begin to develop between 6 and 10 months of age (Oller, 1978). The development of nonlinguistic vocalizations is also an important precursor to the development of word approximations and first words (Oller, Eilers, Neal,

& Schwartz, 1999) and predicts later language development in typical developing children and children with developmental disabilities (Oller, Eilers, Neal, & Cobo-Lewis, 1998; Yoder, Warren, & McCathren, 1998). When relating these findings to the language development in children with Down syndrome, conflicting evidence exists regarding the influence of canonical babbling, or the well-formed syllables produced by infants, on later speech development (Oller, et al., 1999). Several studies demonstrate that the onset of canonical babbling predicts later language development in children with mixed-etiology intellectual disabilities (Yoder, Warren, & Abbeduto, 2004). However, it is important to note that in a separate study (Abbeduto, et al., 2007), canonical babbling did not predict later language development in children with Down syndrome who had little to no delay in the onset of canonical babbling, yet demonstrated other language delays.

In the prelinguistic and early word stages, gestures, such as pointing and reaching, are important aspects of language development. According to findings by Watt et al. (2006), gesture use is significantly related to the development of receptive language skills in children between the ages of 6 and 24 months. The use of gestures and signs for communicative purposes by children with Down syndrome tends to be accelerated when compared with typically developing infants who have similar lexical comprehension abilities (Caselli et al., 1998). Later in development, the use of gestural communication, including sign language, remains a relative strength for this population (Abbeduto, et al., 2007).

Upon the development of prelinguistic communicative skills, children with typical development begin to use words to communicate around 12 months of age and by 24

months of age have approximately 50 words in their expressive vocabulary (Watt, et al., 2006). In a large-scale study, Berglund et al. (2001) found that most children with Down syndrome did not produce their first words until 24 months of age. Berglund et al. also found that delays in the development of first words are persistent, with some children with Down syndrome maintaining less than 10 words in their spoken vocabularies until between 3 and 5 years of age. Hart (1996) also noted significant delays in the lexical development of children with Down syndrome in which their first 50 words emerged between 24 months and 48 months compared to the children with typical development in their study who on average developed their first 50 words around 18 months. Research has shown that the development of 50 words marks when a child transitions from the early words stage of one-word production to the preschool and school age language stages where words are combined to make sentences. Due to the delay in development of initial vocabulary, children with Down syndrome frequently are delayed in this transition from single word production to combining words (Roberts, Price, et al., 2007).

Prelinguistic and Early Word Language Interventions

Infants identified as having Down syndrome typically qualify for and begin receiving Birth to Three services (Saunders, 1995) for their speech and language needs shortly after birth. Thus, most infants with Down syndrome will have an Individualized Family Service Plan (IFSP) detailing specific areas to address in early intervention. There are several efficacious interventions available for children with Down syndrome who are in the prelinguistic and early word stages of development (Aparicio & Balana, 2002). These interventions comprise both broad, general stimulation treatments and specific

goal-directed intervention methods. The general intervention techniques target several aspects of communication for children with Down syndrome in the prelinguistic and early words stages using a variety of formats such as individualized language stimulation (Aparicio & Balana, 2002), group sessions (Aparicio & Balana, 2002), and other community based interventions (Fey, et al., 2006). Other techniques have also been implemented by speech therapists and families in the early stages of communication which incorporate the use of signs or gestures, establishing joint attention, and adult prompting (Roberts et al., 2007).

Specific interventions targeting prelinguistic communication that have been examined for use with children with Down syndrome include methods such as Focused Stimulation (Girolametto, 1998), the Hanen Parent Programme (Baxendale, Frankham, & Hesketh, 2001), Responsivity Education/Prelinguistic Milieu Teaching (RE/RMT) (Yoder & Warren, 2002), and the use of Augmentative and Alternative Communication (AAC) (Branson & Demchak, 2009). Focused Stimulation utilizes interactions between the child with Down syndrome and an adult communicative partner to encourage language development. This main focus of this type of intervention is modeling and increasing opportunities for the child to produce specific communicative targets, such as specific words, Focused Stimulation has been implemented in both specific and non-specific intervention programs developed for children with Down syndrome. A study by Girolametto et al. (1998) examined the effect of parent training in Focused Stimulation on target word acquisition for 12 preschool children with Down syndrome. Although the treatment period was brief in this particular study, it was shown that the interaction style

between mothers and their children that was encouraged by the Focused Stimulation training led to increased lexical-learning opportunities and therefore improvements in expressive language development.

Using techniques similar to Focused Stimulation, the Hanen Parent Programme (Baxendale, et al., 2001) encourages reciprocal interactions between parents and children to promote language development in children with expressive and receptive language delays. Baxendale and Hesketh (2003) found that the Hanen Parent Programme helped to improve the expressive and receptive language abilities of children with language impairment based on the Preschool Language Scale-3 (PLS-3) (Zimmerman, Steiner, & Pond, 1992). A considerable number of children who received the Hanen Parent Programme intervention significantly increased their standard scores pre- to post-intervention such that their post-treatment total language scores were comparable to the total language scores of their typically developing peers. These results further validate the efficacy of using reciprocal interactions in interventions such as the Hanen Parent Programme to encourage early language development for 2- and 3-year-old children with language impairment.

Fey et al. (2006) examined the efficacy of a 6-month Responsivity Education/Prelinguistic Milieu Teaching (RE/PMT), which uses a combined approach to increase children's use of coordinated eye gaze, vocalizations, and gestures as well as teach parents to be responsive to the nonverbal and linguistic behaviors of their children. Fey et al. determined that 24- to 33-month old children with developmental delays, including children with Down syndrome who received RE/PMT demonstrated higher

levels of communicative performance than children who did not receive RE/PMT.

Another study looking at the longitudinal effect of implementing RE/PMT found a small short-term effect on the prelinguistic language skills of the children with Down syndrome (Warren et al., 2008). According to Warren, et al., this small effect may be attributed to the small dosage in treatment (1 hour per week) over a short period of time (6 months). It has been suggested by several researchers who have studied RE/PMT that this intervention be used more often for a longer period of time (Abbeduto, et al., 2007; Fey, et al., 2006; Warren, et al., 2008; Yoder & Warren, 2002; Yoder, et al., 2004).

Finally, the use of AAC techniques and devices has been recommended to encourage early language development in children with various developmental disabilities and communication delays (Branson & Demchak, 2009). In a review of several AAC types, including signs, gestures, voice output devices, and picture communication systems, Branson & Demchak found that the interventions incorporating these modes of communication were effective across all ages and disabilities, including Down syndrome. For example, the use of gestures and signs were efficacious in improving intentional communication for children with Down syndrome (Fey, et al., 2006). The use of other AAC types such as the Picture Exchange Communication System (PECS) and a voice output communication device (VOCA) are effective intervention strategies for children with developmental disabilities such as Autism Spectrum Disorders (ASD) and cerebral palsy and should be considered for children with Down syndrome (Bondy & Frost, 1994; Branson & Demchak, 2009). Understanding the efficacy of AAC and other language intervention types used during the prelinguistic and

early words stage can help both researchers and clinicians develop more effective interventions for children with Down syndrome.

Preschool and School-age Language Development

As previously noted, children with Down syndrome tend to produce their first spoken words significantly later than typically developing, same age peers (Berglund, et al., 2001). This delay in early word production perpetuates language delays in preschool and school-age children with Down syndrome. Preschool-age children with Down syndrome commonly remain in the prelinguistic and early words language stages; whereas, preschoolers with typical development advance quickly through these stages and combine multiple words to communicate in an adult-like manner (Hart, 1996). To this point, Berglund, et al. found in their survey examining the spoken language abilities of children with Down syndrome between the ages of 1 and 5 years, that at least 25% of children between the ages of 4 and 5 years continued to use single word utterances. Moreover, Iverson, Longobardi, and Caselli (2003) found the use of two-word utterances by children with Down syndrome ranging in age from 37 to 56 months to be significantly delayed in comparison to children with typical development ranging in age from 16 to 20 months.

When children with Down syndrome reach school-age, they frequently begin combining words and using more complex language. Thus, the language abilities of school-age children with Down syndrome tend to be similar to the language abilities of typically developing preschool children. Although both the receptive and expressive language abilities of individuals with Down syndrome are delayed compared to peers

with typical development, children with Down syndrome have receptive language abilities that are significantly stronger than their expressive language abilities on most language measures (Price, Roberts, Vandergrift, & Martin, 2007; Rosin, et al., 1988). However, both the expressive and receptive development of morphology and syntax are language areas of particular difficulty for school-aged children with Down syndrome (Chapman & Hesketh, 2000; Eadie, Fey, Douglas, & Parsons, 2002; Price et al., 2008). For example, Eadie et al. (2002) found that when matched for MLU, children with Down syndrome with a mean age of 7 years performed significantly more poorly than children with typical language with a mean age of 3 years on grammatical morphemes, particularly the use of third person singular and regular past tense, and articles. Additionally, Joffe and Varlokosta (2007) compared the syntactic development of 5- to 14-year-old children with Down syndrome to 6- to 13-year-old children with Williams syndrome and 3- to 6-year-old children with typical development. Their findings indicated that when children were matched on nonverbal mental age, the syntactic abilities of children with Down syndrome were significantly delayed in comparison to the other groups. In particular, the comprehension of grammar, passive and active verbs, and wh- questions of children with Down syndrome were significantly impaired. The research findings of both Eadie, et al. and Joffe & Varlokosta support the need for language intervention for school-age children with Down syndrome particularly in the area of syntactic development.

As school-age children with Down syndrome progress in language development, more complex language skills are observed. Some aspects of conversational language are

particular strengths for school-age children with Down syndrome (Beeghly, Weiss-Perry, & Cicchetti, 1990). For example, in a study comparing the communication skills of 4- to 16-year-old boys with Down syndrome to 3- to 14-year-old boys with fragile X syndrome (Roberts, Martin, et al., 2007), rate of topic maintenance was significantly higher for the participants with Down syndrome. However, it is important to note that the quality of the conversational turns of the participants with Down syndrome were not as strong. The participants with Down syndrome produced conversational turns that were significantly less elaborative and included simple responses and acknowledgements in comparison to children with typical development.

Preschool and School-age Language Interventions

Once a child reaches school-age, an Individualized Education Plan (IEP) is developed to address the child's goals in various aspects of their academic and functional skill development, including language development. Because the language deficits of school-age children with Down syndrome cross several areas of language development, it is important that children with Down syndrome receive intervention services targeting a broad range of language abilities. However, it is important for clinicians to consider the heterogeneity of the language profiles of children with Down syndrome and to carefully design intervention plans that specifically address the needs of each of their clients. Research focused on evaluating such intervention approaches for preschool and school-age children with Down syndrome is limited.

Kumin and her colleagues (1996) recommend a comprehensive language treatment program for children with Down syndrome between the ages of 5 and 12 years

that can be individualized based on each child's specific language needs. Similar to prelinguistic treatment approaches, the recommended intervention utilizes both direct intervention and family education to provide a holistic approach to language development. This intervention aims to enhance both receptive and expressive language abilities in addition to vocabulary instruction. There are several features of the intervention recommended by Kumin, et al., including the use of a pacing board to increase language complexity by targeting syntactical elements of language such as auxiliaries, pronouns, and various verb endings as well as computer-based interventions and the use of alternative and augmentative communication (AAC) devices.

Other interventions for school-age children with Down syndrome apply techniques similar to interventions used in the prelinguistic stage of language development. Recasting is one technique that has been used in the school-age stages of language development. Early research done by Camarata, Yoder, and Camarata (2006) examined the use of both speech recasts and grammatical recasts to encourage speech intelligibility and correct grammar use for children with Down syndrome between the ages of 4 and 7 years. Their findings revealed that grammatical recasting led to increases in MLU and in comprehensibility of speech.

Adolescent Language Development

As children with Down syndrome progress into adolescence, many of the same language weaknesses present in previous stages persist. Moreover, the individual language profiles of adolescents with Down syndrome remain variable (Chapman, 1997). In general, adolescents with Down syndrome continue to demonstrate language delays

when compared with typically developing peers in many aspects of language comprehension and production, including syntax and morphology, and narrative language (Chapman, Seung, Schwartz, & Bird, 1998). Language comprehension continues to be a relative strength for many adolescents with Down syndrome in comparison to receptive language; however, when compared to peers with typical development or adolescents with cognitive impairment of other etiologies, language comprehension continues to be delayed (Chapman, 2006).

Morphologic and syntactic language abilities continue to be significant areas of language weakness for adolescents with Down syndrome. For example, in an examination of MLU, total number of words used, and different words used in narrative language samples, Chapman et al. (1998) found significant differences between children with Down syndrome aged 5 through 20 years and control groups with typical development aged 2 through 6 years matched on nonverbal age. Similarly, Keller-Bell and Abbeduto (2007) compared the morphologic and syntactic abilities of adolescents with Down syndrome aged 13 through 23 year to those of children with typical development aged 3 through 6 years matched on nonverbal mental age. The researchers found that adolescents with Down syndrome produced significantly fewer grammatically correct utterances. Additionally, Finestack and Abbeduto (2010) compared the expressive language profiles of adolescents and young adults with Down syndrome 12 to 23 years of age to children with typical development 3 through 6 year of age matched on nonverbal mental age. The participants with Down syndrome demonstrated significant weaknesses

in their complexity of verbs and negation as well as their overall sentence complexity and grammaticality.

Several studies have examined the narrative language of adolescents with Down syndrome. For example, Keller-Bell and Abbeduto (2007) compared the use of narrative evaluation devices by adolescents with Down syndrome aged 13 through 23 years and children with typical development aged 3 through 6 years matched on nonverbal mental age. Their findings indicated that the adolescents with Down syndrome used onomatopoeia, exclamations, and character dialogue evaluation devices more frequently than the younger children with typical development. Findings by Boudreau and Chapman (2000) also support a narrative advantage for adolescents with Down syndrome. In their comparative study of adolescents and young adults with Down syndrome ranging from 12 to 26 years of age and children with typical development ranging from 2 to 8 years of age matched on mental age, syntax, and MLU, Boudreau and Chapman found that the participants with Down syndrome were significantly more likely to produce longer narratives that included more inferences. However, it is important to note that the participants with typical development outperformed the participants with Down syndrome measures of narrative cohesion and fluency.

Adolescent Language Interventions

There is a dearth of research examining interventions for adolescents with Down syndrome in the conversational language stage. One study completed by Hewitt, Hinkle and Miccio (2005) examined a grammatical intervention for use with adults ranging in age from 29 to 52 years. Using strategies such as modeling and prompting, the

intervention comprised a hybrid of structured and naturalistic group contexts to improve grammar in conversational language. Study results indicated increased spontaneous production of specific grammatical features targeted in the intervention as well as overall improved expressive syntax. These results are consistent with the findings of Chapman, et al.(1998), which suggest that adolescents and adults with Down syndrome are able to improve their expressive language with the implementation of language interventions.

Parents' Perception of Language Abilities and Intervention Services

The current study aims to gain a better understanding of parents' perspectives of their child's language development and the language interventions provided to their child with Down syndrome throughout development. Although previous research studies (Berglund, et al., 2001; Starr, Foy, Cramer, & Singh, 2006) have utilized surveys to gain information regarding parents' perceptions of the language abilities of children with Down syndrome and intervention services, this study is optimal because of its aim to examine parents' perspective concerning their child's language abilities and the specific interventions that have been implemented across the child's lifespan. Previous studies have not considered both language abilities and intervention effectiveness from the perspective of parents, particularly across multiple stages of language development. .

For example, Berglund, et al. (2001) used parent surveys to compare 330 children with Down syndrome to 336 children with typical development using primarily the Swedish Early Communicative Development Inventory (Berglund & Eriksson, 2000) to obtain information regarding the language skills of children with Down syndrome between the ages of 1 and 5 years. Their study focused only on the child's current

language skills and did not address parent perception regarding the language interventions their child was receiving at the time of the study. The current study focuses on children with Down syndrome of all ages and examines parental perspective of language development and services throughout childhood and adolescence.

In another survey, Starr et al. (2006) examined parent's perceptions regarding education of their child diagnosed with Down syndrome, Autism Spectrum Disorder, or a learning disability. Specifically, parents were asked questions regarding their child's communication level, class placement (general education or special education), as well as the school and teacher's general knowledge of their child's disability and the best practices used in instruction. Parents of children with Down syndrome reported that their child had an IEP; however the child's IEP did not always include parents' goals and objectives. The lack of inclusion of these goals may limit parental satisfaction with the intervention services their child is receiving and the carryover of the development of these specific areas outside of school. The current study aims to identify parent satisfaction concerning the speech-language intervention that their child is receiving across settings.

The current study was designed to examine parents' perspectives of the language services provided for children with Down syndrome in relation their child's language abilities at five distinct language stages. Relating parental reports of their child's language abilities to their opinions regarding the language services that their child has received provides insight about individual preferences for specific types of services and the types of services that may be most effective. Because there are limited studies that

specifically look at parental perspectives regarding the language abilities of children with Down syndrome and the language interventions that they are provided, this study aims to identify the areas in which parents are most concerned regarding their child's language. Knowing specifics about parents' expectations concerning their child's language abilities and the language interventions that they receive can help promote further research in these areas as well as guide the intervention strategies of speech pathologists working with children with Down syndrome.

Current Study

This study aims to better understand the perceptions of parents of children with Down syndrome regarding the language abilities and language services their child has received throughout childhood and adolescence. Specifically, the study was designed to address the following questions:

1. How do parents of children with Down syndrome perceive their child's language development and do these perceptions differ based on the chronological age of the child?

Based on aforementioned research findings, it is predicted that parents of children in the early stages of language development will report that their child comprehends more words and signs than they produce and uses more signs than spoken words. It is predicted that parents of children who are combining words will report that their child has difficulty with advanced syntactic structures and inconsistently uses verb tenses. Additionally, it is predicted that as children

advance in age parents will perceive their child's language skills as more complex.

2. What is the location of speech-language services that children with Down syndrome receive and to what extent are these services received in individual or group settings with and without a caregiver present? Do services and treatment goals differ based on the child's stage of language development or the child's chronological age?

It is predicted that children receive more services in the school setting due to the high level of accessibility of therapists and other professionals as part of the educational system. It is also predicted that children will receive individual services and services without a caregiver present more often than the other contexts given that school-based services tend to be provided in a classroom or therapy room environment where parents are not generally present. It is predicted that children in the later stages of language development (almost complete sentences and conversation) will be more likely to receive individual services at school compared to children in the early stages of language development (prelinguistic, early words, and combining words) who are likely to be younger and receiving home-based services. Additionally, it is expected that the average number of goals that children have in language treatment will be relatively equivalent throughout the different ages and stages of language development given that children with Down syndrome have ongoing speech and language needs throughout development.

3. How involved are parents in their child's speech-language sessions and does involvement differ based on the child's stage of language development or the child's chronological age?

It is predicted that parents participate in therapy and implement techniques outside of therapy sessions more frequently with younger children than with older children regardless of language stage because children tend to spend more time with their parents and are more dependent on their parents for transportation to therapy sessions or preschool and daycare settings where therapy may take place when they are younger. It is also predicted that parents are more involved in their child's language services in earlier stages of language development based on the availability of interventions targeting parent involvement in these stages.

4. How beneficial are the speech-language services provided to children with Down syndrome and do perceived benefits differ based on the child's stage of language development or the child's chronological age?

It is predicted that parents perceive their child's language services as more beneficial in earlier language stages than in later stages based on the greater number of evidence-based language interventions available in these stages.

Progression to the next stage tends to occur more quickly than in the later stages.

It is also predicted that parents with younger children perceive their child's language services as more beneficial than parents with older children based on the assumption that parent involvement is higher with younger children and therefore their input is given more frequently to maximize the benefits of the services

provided. Younger children tend to make gains more often than older children, which may contribute to parents perceiving their child's language services as more beneficial when their children are in the younger age group in comparison with the older age groups.

Method

Participants

Parents with a child with Down syndrome were recruited for participation in this study. A total of 112 individuals consented to the survey; however, 13 surveys were not completed, resulting in 99 surveys. Upon approval from an Institutional Review Board at the University of Minnesota, perspective participants were nationally recruited via word-of-mouth, e-mail, newsletters, and social network sites from Down syndrome organizations across the United States. The organizations were identified using the National Down Syndrome Society's website, which includes links to websites and contact information for various Down syndrome associations across the United States (York & Chapel, 2011). An initial letter introducing the study and asking permission was sent to 95 organizations via email. Of these 95 organizations, 12 organizations agreed to participate in distributing the survey. Agreeing organizations chose how they would distribute the survey, most choosing to send the information via email distribution lists

Parents interested in completing the survey were directed to the survey's website. At the website, parents were provided with more information about the study and a consent form. Consenting participants were given a passcode upon entering the survey website, which they could use to access their survey and complete the survey at their own

leisure. The participant demographics appear in Table 1. The demographics are separated by language stage. Of those who participated, 11 were biological fathers of children with Down syndrome, 86 were biological mothers, and 1 was a grandmother of a child with Down syndrome. One participant did not specify their relationship to the child with Down syndrome. The parent participants ranged in age from 28 to 68 years. Participants resided across the United States including the Northeast (17%), Southeast (27%), Midwest (41%), West (11%) and Southwest (2%) regions.

The respondents' children with Down syndrome consisted of 40 females and 58 males, with one participant who did not specify their child's gender. These children ranged in age from 16 months to 42 years. The child demographics appear in Table 2. Parents had children in four of the five language stages surveyed (see Figure 1), including the early words stage (18%), the combining words stage (16%), the complete sentences stage (28%), and the conversation stage (38%). None of the children were reported to be in the prelinguistic stage of language development.

Table 1
Respondent Demographic Information

Variable	STAGE			
	Early Words n=17	Combining Words n=16	Complete/ Almost Complete Sentences n=28	Conversation n=38
Respondent				
Father:Mother	0:17	5:11	5:23	1:35
Grandmother	0	0	0	1
Did not respond	0	0	0	1
Age				
25-30	2	3	1	0
31-40	8	6	7	4
41-50	7	6	14	17
51-60	1	0	5	12
Over 60	0	1	0	3
Did not respond	0	0	1	2
Geographic Region				
Northeast	4	3	5	5
Southeast	4	3	10	10
Midwest	9	9	7	16
West	0	0	6	5
Southwest	0	0	0	1
Did not respond	0	1	0	1
Residential Setting				
Rural	7	2	2	8
Urban	1	3	1	5
Suburban	9	11	25	22
Did not respond	0	0	0	3
Income				
\$0-\$25,000	0	0	2	0
\$25,000-\$50,000	3	1	3	4
\$50,000-\$100,000	7	8	8	11
\$100,000-\$150,000	4	5	10	11
Over \$150,000	3	1	2	7
Did not respond	0	1	3	5

Table 2

Child Demographic Information

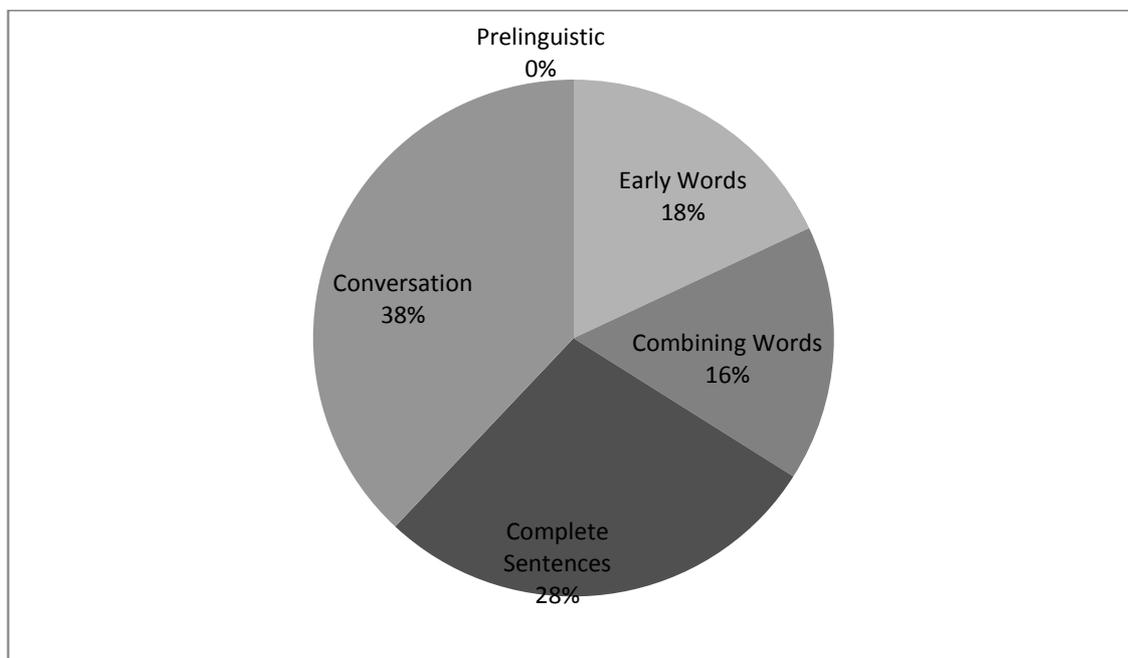
Variable	STAGE			
	Early Words n=17	Combining Words n=16	Complete/ Almost Complete Sentences n=28	Conversation n=38
Child's Age (Years)				
Mean	4.83	5.724	8.94	16.18
SD	4.89	5.07	4.21	8.29
Range	1.04–19.11	2.05–42.00	3.09–18.07	6.02–41.00
Did not respond	0	0	1	1
Gender				
Female:Male	6:11	7:9	11:17	16:21
Did not respond	0	0	0	1
Diagnosis				
Trisomy 21	14	13	24	32
Translocation	1	0	1	1
Mosaicism	0	0	0	1
Not Tested	2	3	3	4
Primary Ethnicity				
African American	0	2	1	0
Hispanic/Latino	1	0	0	0
White/Caucasian	16	14	27	37
Did not respond	0	0	0	1
Family				
Mother: Father	17:15	14:14	28:24	35:29
Number of Siblings				
Mean	1.82	1.625	1.68	1.61
SD	1.45	1.67	1.36	1.15
Range	0-6+	0-6+	0-6+	0-5

Table 2

Child Demographic Information (Continued)

Variable	STAGE			
	Early Words n=17	Combining Words n=16	Complete/ Almost Complete Sentences n=28	Conversation n=38
Living Environment				
With Family	17	16	28	35
Group Home	0	0	0	1
Other relative	0	0	0	1
Other	0	0	0	1
Hearing Loss				
Normal	12	14	21	26
Mild/Moderate (at least one ear)	2	1	5	10
Severe (at least one ear)	1	0	0	1
Uncertain	1	1	2	1
Other Dx				
Yes:No	13:4	9:7	17:11	19:19
Autism Spectrum Disorders	2	0	0	0
Language				
English	16	16	27	38
Spanish	0	0	0	1
German	0	1	0	0
Polish	0	0	1	0
ASL	1	0	1	1
Sign Language				
Yes:No	16:1	15:1	10:18	8:30
Primarily alone	7	2	0	0
Supplement to spoken lang.	9	13	10	8

Figure 1

Child Participant Language Stages*Parental Survey*

Depending primarily on the language stage of the child, the survey consisted of 111 to 231 total questions (see Appendix A). For purposes of this study, parents were asked to indicate which of five stages of language development characterized their child's current language abilities. The five stages included the prelinguistic stage, early words stage, combining words stage, complete/almost complete sentences stage, and the conversational stage. Caregivers completed the survey beginning with questions regarding their child's current language ability level followed by questions regarding their child's language developmental milestones and therapy services through all of the previous language stages. For example, a caregiver of a child in the prelinguistic stage of language development completed a survey consisting of 43 questions specifically

addressing the child's prelinguistic language abilities and services. Parents of a child in the conversational stage, the final stage addressed in this survey, completed a survey of 166 questions regarding the child's language abilities and services beginning with the conversational stage and followed by questions regarding their child's language development and services during the stages of complete/almost complete sentences, combining words, early words, and prelinguistic development. Parent-friendly language that gave examples regarding certain responses was utilized to ensure that parents could answer questions about each stage as accurately as possible.

To identify which language stage most accurately characterized the participants' child, parents answered a multiple choice question indicating their child's current language abilities. Parents who indicated that their child was not using words and/or signs were asked only the prelinguistic stage questions. Parents who specified that their child is currently using single words and/or signs began by answering the questions specific to the early words and/or signs stage. The parents whose children were combining words and/or signs at the time of the survey were allowed to begin the survey at the combining words portion of the survey. Parents who responded that their child uses complete/almost complete sentences were directed to the complete/almost complete sentences section of the survey. Finally, parents who answered that their child uses conversational language began by completing the conversational stage portion of the survey.

All participants began the survey by answering questions to convey demographic information about themselves, their child with Down syndrome, and other members of their household. This information was obtained using 68 demographic questions. These

questions addressed the Down syndrome diagnosis, the languages spoken in the home, and other aspects of the child's current residence, including whether he or she lives in the household of the parent or in alternate housing such as a group home or the home of a relative or friend. An additional 24 questions were presented to acquire information concerning the child's second parent or guardian as well as any siblings in the child's household. Finally, after determining the child's language stage, 14 additional demographic questions were posed to gain information about the child for whom the survey is relevant regarding factors such as hearing loss and an additional diagnosis that could also influence the child's language abilities

Depending on the language stage, between 6 and 10 questions were asked regarding the child's specific language abilities. Examples were given for most questions to indicate common utterances that would indicate the child's utilization of a specific communicative behavior. For example "want cookie" was given as an example of an utterance for the combining words stage and "Plane is flying" was given as an example of an utterance for the complete/almost complete sentence stage. Each section began by having the parent indicate what mode of communication the child primarily uses and what mode of communication the parent primarily uses with the child. Subsequent questions were posed to analyze the specific behaviors and language abilities expected at the given stage. The abilities addressed in the prelinguistic stage included vocalizations, words comprehended, and the use of nonverbal communication (i.e. eye contact and gestures). In the early words stage, the behaviors addressed included the child's use and comprehension of words and signs. The combining words stage of language development

addressed behaviors including the child's use of 2-word utterances, utterances including verbs, and questions. The complete/almost complete sentences stage addressed language abilities that involved the use of complete and near complete sentences including the frequency at which the child uses forms such as verbs, adjectives, questions, negations, and correct present and past tense sentences. Finally, the conversational stage addressed the complex language abilities of the children whose parents indicated that they were in this particular stage. The questions asked in this portion of the survey addressed the same language skills that were addressed in the complete/almost complete sentence stage as well as the child's use of more complex language including complex sentences (i.e. "When I get home I will eat a snack."), metaphors and idioms (i.e. "It's raining cats and dogs."), narrative language abilities. Additionally, in each stage, participants had the opportunity to indicate their child's current literacy skills.

Each language stage section concluded with 27 questions regarding the therapy services that the child was currently receiving and space for parents to include additional comments about speech and language services. Parents were asked questions regarding the format of speech and language services (e.g., individual or group sessions with and without parent/caregiver) and the specific settings in which these services are given (e.g., home, daycare/school, clinic). Similar questions were asked regarding other special services that the child was receiving at the time the survey was completed. This section concluded with open-ended questions that asked parents to state the goals currently addressed in speech and language therapy, other goals the parents would like to have

addressed in speech and language therapy, and other interventions that the parent would have liked their child to receive.

Survey Development

The web-based survey was developed through the CLA-OIT Survey Service at the University of Minnesota using the survey software, Survey Solutions Enterprise Edition, by *Perseus Development Corporation* (Chalasan & Baldwin, 2005). The online survey allowed for the use of skip logic during survey completion, which permitted individuals who participated in the survey to bypass questions that were irrelevant based on their responses to previous questions. Throughout the survey, participants were allowed to skip questions that they did not feel comfortable answering or that they were unsure of the answer.

The survey was generated after a literature review was completed to identify specific information regarding the typical language abilities of children with Down syndrome during specific language stages. Specific speech and language skills to assess at each specific language stage were identified by the researchers after reading and analyzing the information obtained from previous research studies. Before the survey was implemented several speech-language clinicians and other researchers viewed the survey and provided feedback. Several parents of children with Down syndrome also piloted the survey and provided feedback concerning the clarity of the survey questions. Only minor modifications were made to the survey before sending it out to organizations for completion by parents.

Statistical Design

To examine parent perceptions the language abilities of children with Down syndrome throughout the lifespan (Study Question 1), two separate statistical analyses were completed. In the first set, Wilcoxon Signed-Ranks Tests were completed to assess each of the four language stages reported. In these analyses, the two independent variables compared were the language stage (i.e., early words, combining words, complete sentences, and conversation) and the different language skills assessed in each stage (e.g., number of spoken words/signs produced, frequency of 2-word utterances, frequency of correct verb tense). Bonferroni corrections were applied to account for multiple comparisons at each stage. The second set of analyses used Wilcoxon Signed-Ranks Tests to examine different age groups within each stage (e.g., preschool, school-age, adolescents). Bonferroni corrections were applied to account for multiple comparisons for each age group within each stage.

Parent perceptions of the location and contexts language services received by their child with Down syndrome (Study Question 2) were examined using two separate statistical analyses. To assess the location and services provided, two separate Friedman tests were conducted. The variables compared in these analyses were the frequency of location type (i.e., home, clinic/hospital, school/daycare, other) as well as the frequency of different contexts (i.e., individual vs. group both with and without the caregiver present). A Bonferroni correction was applied to account for multiple comparisons. Significant Friedman tests were followed by Wilcoxon tests. Additionally, Kruskal-Wallis tests were completed to further analyze the location and contexts of services

according to the child's stage of language development and chronological age.

Significant Kruskal-Wallis tests were analyzed using Mann-Whitney Tests.

Chi-Square analyses were utilized to examine level of parental involvement (i.e., not involved, participates in therapy, implements treatment) (Study Question 3) and parents' perceptions of the benefits of services (i.e., not beneficial vs. beneficial) (Study Question 4). To assess these aspects of language services according to language stage and chronological age, two-way contingency table analyses were conducted. Significant results were analyzed further using pairwise analyses. Bonferroni corrections were applied to account for multiple comparisons.

Results

A total of 99 parents participated in this study and represented four of the five language stages surveyed. The prelinguistic stage was not represented by any parent participants. The early words stage was represented by 17 (17.1%) parents, the combining words stage was represented by 16 (16.1%) participants, the complete sentences stage was represented by 28 (28.3%) participants, and the conversation stage was represented by 38 (38.4%) participants. Of the 99 total participants who completed the survey, 81 parents (81.8%) indicated that spoken language was their child's primary mode of communication, 16 parents (16.2%) indicated that signs and gestures were their child's primary mode of communication, 1 parent (1%) indicated that their child used both spoken words and signs, and 1 parent (1%) indicated that their child primarily used oral/signs/AAC device (see Figure 2). Sign language was reported to be used by a total of 49 children, 40 of which use sign to supplement their spoken language (see Table 3).

Figure 2

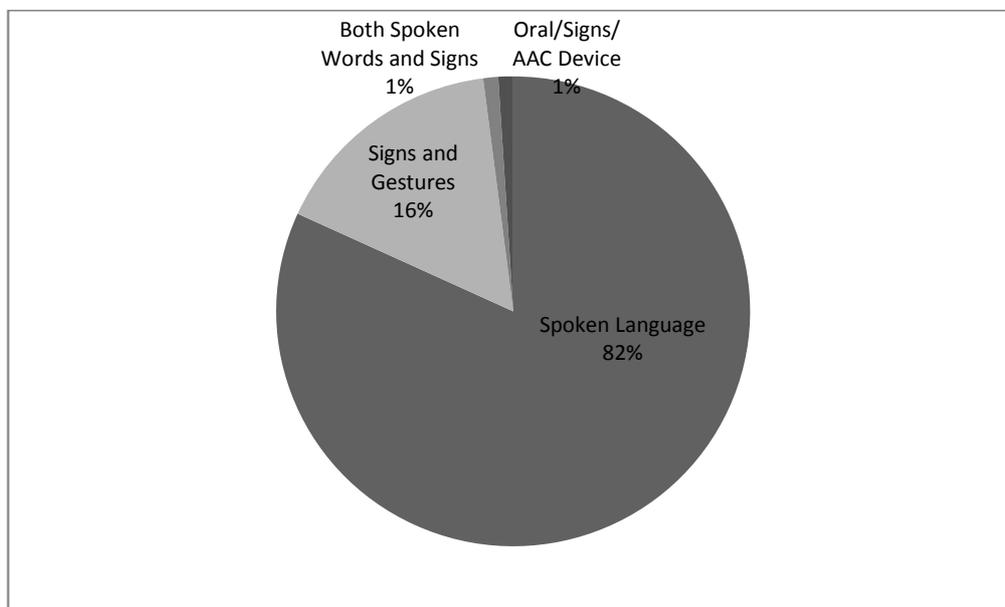
Child Mode of Communication

Table 3

Mode of Communication According to Language Stage

Variable	STAGE			
	Early Words Stage n=17	Combining Words Stage n=16	Complete/Almost Complete Sentences Stage n=28	Conversation Stage n=38
Child's Mode of Communication (%)				
Oral/Spoken Language	23.53	68.75	100	100
Signs/gestures	64.71	31.25	0	0
Oral/Signs/AAC device	5.88	0	0	0
Spoken words & signs	5.88	0	0	0
Parents' Mode of Communication (%)				
Oral/Spoken Language	70.59	100	100	100
Signs/gestures	17.65	0	0	0
Other	11.76	0	0	0

Parents' Perceptions of Their Child's Language Development

Early Word Stage. Seventeen of the respondents indicated that their child was in the early word stage of language development (see Table 5). The average age for children in this stage was 1.84 years (range = 16 months to 5 years) as shown in Table 5.

Wilcoxon Signed-Ranks Tests were conducted to determine if there were statistically significant differences in the total number of signed and spoken words comprehended and produced. Due to multiple comparisons, a Bonferroni correction was applied, resulting in a significance level set at $p = .01$ ($.05/4$). Two of the comparisons yielded significant findings such that parents reported that their child comprehended significantly more spoken words than they produced ($Z = -2.97$, $p = .003$) and that they comprehended more

spoken words than signs ($Z = -2.86, p = .004$). There were no significant differences between the number of signs produced and comprehended ($Z = -1.34, p = .18$) or the number of spoken words and signs produced ($Z = -.4257, p = .671$).

Table 4

Early Word Stage Language Skills

Variable	Early Words Stage n=17
Age at Beginning of Stage (Years)	
Mean	1.84
SD	1.15
Range	1.04–5.00
Age (Years)	
1	4
2	4
3	3
5+	6
Number of Spoken Words Comprehended	
0-25 words	4
26-50 words	4
51-100 words	2
100+ words	7
Number of Signs Comprehended	
0-25 words	10
26-50 words	4
51-100 words	1
100+ words	2
Number of Spoken Words Produced	
0-25 words	13
26-50 words	2
51-100 words	1
100+ words	1
Number of Signs Produced	
0-25 words	11
26-50 words	2
51-100 words	1
100+ words	2
Did Not Respond	1

Four separate two-way contingency table analyses were conducted to evaluate age (i.e., 1-year-olds, 2-year-olds, 3-year-olds, 5+ year-olds) differences in the number of

spoken words produced and the number comprehended as well as the number of signed words produced and comprehended. Age was not significantly related to any of the variables, Pearson $\chi^2(9, N = 17)$ range = 6.27-12.81, p range = .34-.71, Cramer's V range = .35-.50 (see Figures 3 and 4).

Figure 3 displays that no 1 year olds comprehended more than 100 spoken words and that 1, 2, and 3 year olds produce less than 100 spoken words. Figure 3 also reveals that all 1 year olds in this stage produced 0-25 spoken words. Figure 4 shows that all 1 year olds comprehend and produce 0-25 signs and only the 5 year olds in this stage were indicated as comprehending and producing more than 100 words.

Figure 3

Spoken Words Comprehended and Produced According to Age

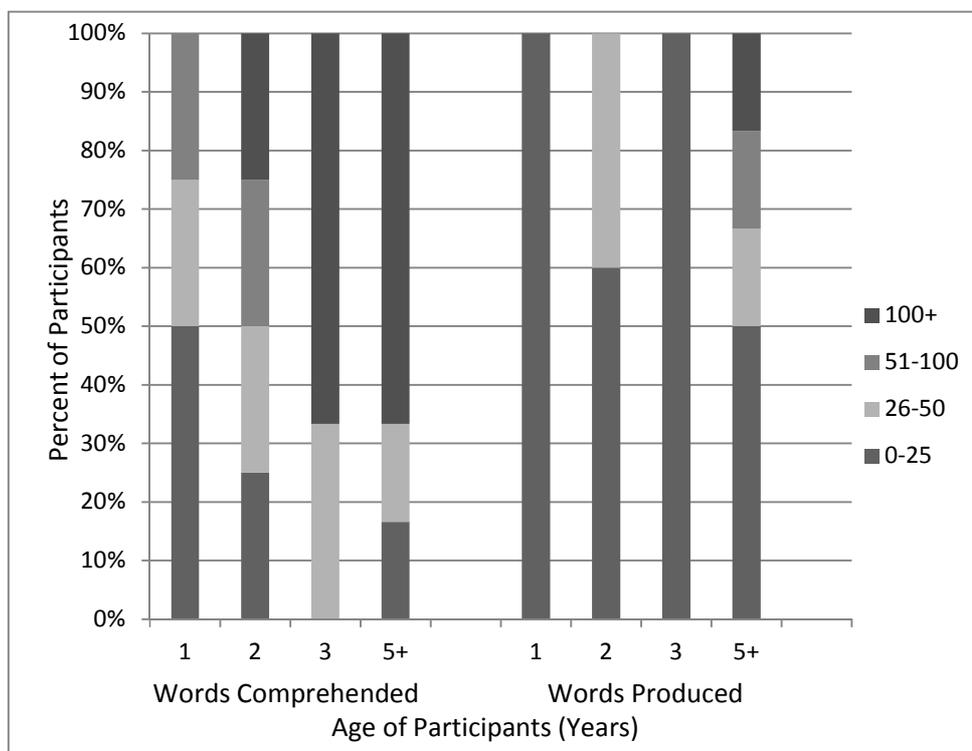
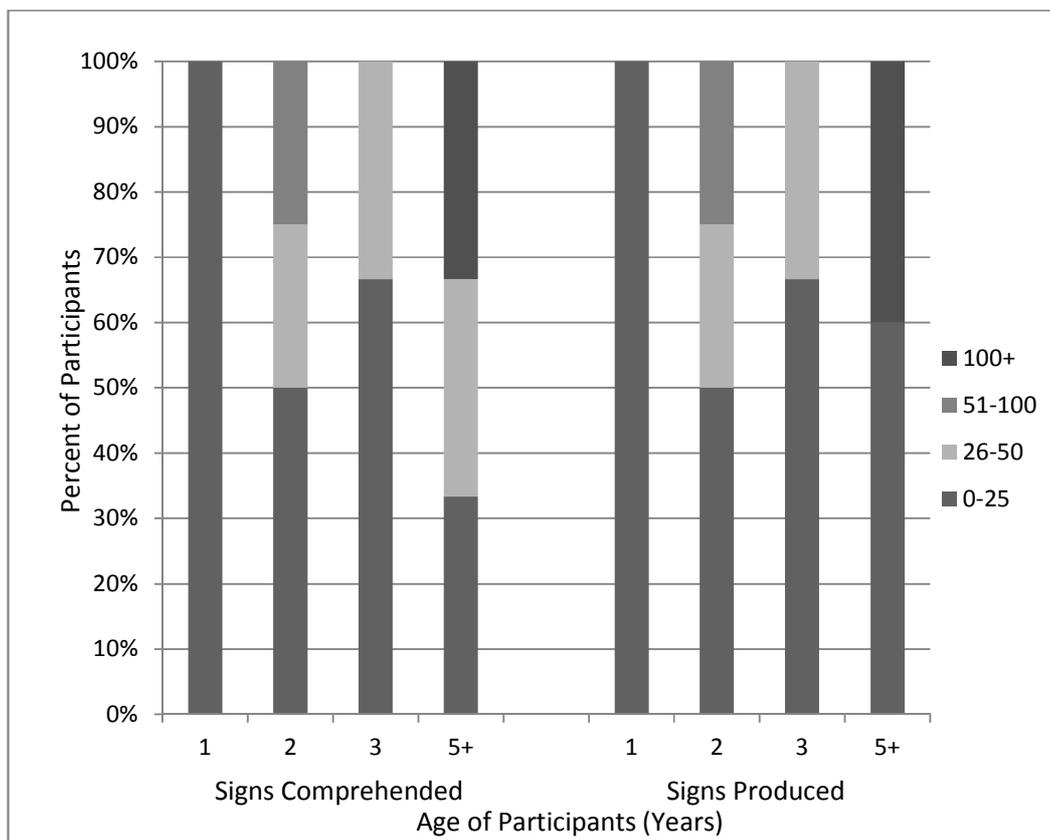


Figure 4

Signs Comprehended and Produced According to Age

Combining Words Stage. Sixteen respondents indicated that their child was in the combining words stage of language development. Table 5 shows that the average age for children in this stage was 3.41 years (range = 18 months to 42 years). Wilcoxon Signed-Ranks Tests were conducted to determine if there were statistically significant differences in the overall frequency of 2-word utterances, utterances with verbs, and utterances with questions. Frequency was considered in terms of parental ratings of never/rarely, sometime/often, and most of the time/always. Due to multiple comparisons, a Bonferroni correction was applied, resulting in a significance level set at $p = .02$ ($.05/3$).

The frequency of 2-word utterances was significantly greater than the frequency of utterances that were questions ($Z = -2.99, p = .003$). Additionally, the frequency of utterances with verbs was greater than the frequency of utterances that were questions ($Z = -2.72, p = .007$). No significant difference was found between the frequency of 2-word utterances and the frequency of utterances with verbs ($Z = -1.68, p = .10$).

Table 5

Combining Words Stage Skills

Variable	Combining Words Stage n = 16
Age at Beginning of Stage (Years)	
Mean	3.41
Standard Deviation	1.55
Range	1.06 – 42
Did Not Respond	2
Age (Years)	
2	4
3	3
4	2
5	3
12+	4
Frequency of 2-word Utterances	
Never-Rarely	1
Sometimes-Often	6
Most of the time-Always	8
Did not respond	1
Frequency of Utterances with Verbs	
Never-Rarely	2
Sometimes-Often	8
Most of the time-Always	5
Frequency of Questions Asked	
Never-Rarely	11
Sometimes-Often	2
Most of the time-Always	3

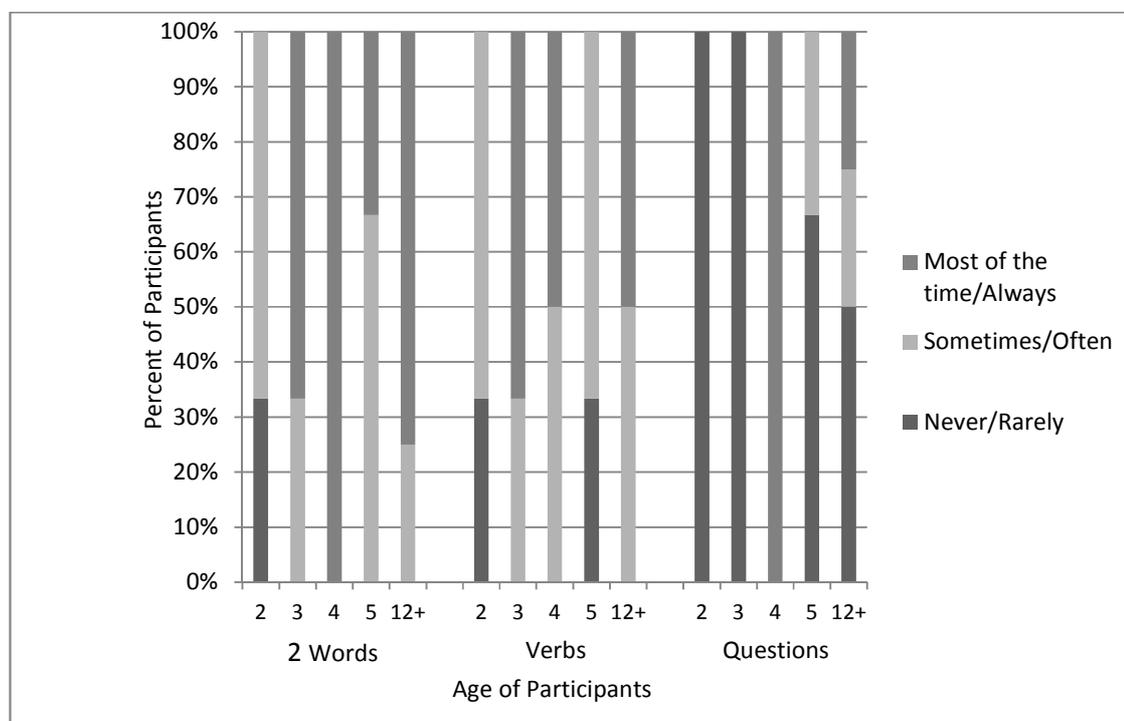
Three separate two-way contingency table analyses were conducted to evaluate performance by age. The children in this group were subdivided into the following age

categories: 2-year-olds, 3-year-olds, 4-year-olds, 5-year-olds, and 12 years and older. No children between the ages of 6 and 12 years of age were represented in the combining words stage in this survey (see Figure 5). None of the tests were significant, Pearson $\chi^2(4, N = 16)$ range = 1.41-6.00, p range = .20-.61, Cramer's V range = .23-.43 (see Figure 5).

Figure 5 shows that 2 year olds were the only ones indicated as never/rarely using 2 word utterances. Figure 5 also displays that children in both the 2 and 5 year old age groups were indicated as never/rarely using verbs, whereas children in the 3, 4, and 12+ year old age groups had children that were indicated as using verbs most of the time/always. Finally, in terms of questions Figure 5 exhibits that all of the children in the 4 year old group were indicated as using questions most of the time/always whereas all of the children in the 2, 3 year old age groups and a majority of children in the 5 year old age group were indicated as rarely/never using questions. This figure also reveals that approximately half of the children in the 12+ year old age group were indicated as rarely/never using questions.

Figure 5

Frequency of 2-word Utterances, Verbs, and Questions According to Age



Almost Complete Sentences Stage. Twenty-eight children were reported to be producing complete/almost complete sentences (see Table 7). Table 7 indicates that the average age of children in this stage was 6.19 years (range = 3 to 12 years). Wilcoxon Signed-Ranks Tests were conducted to determine if there were statistically significant differences in the overall frequency of 3- to 4-word utterances, sentences with a verb, and correct use of verb tense, adjectives, questions, and negations. Frequency was considered in terms of parental ratings of never/rarely, sometime/often, and most of the time/always. Due to multiple comparisons, a Bonferroni correction was applied, resulting in a significance level set at $p = .02$ ($.05/3$). A significant difference was found between the frequency of 3- to 4-word utterances and the frequency of utterances with verbs ($Z = -$

2.45, $p = .01$) where 3- to 4-word utterances were indicated as being used more frequently. The frequency of utterances with tense markings was not significantly different than the frequency of utterances with adjectives ($Z=-1.66$, $p = .10$). Finally, the frequency of utterances that were questions was not significantly different than the frequency of utterances that were negations ($Z < .001$, $p = 1.00$).

Table 6

Almost Complete Sentences Stage Skills

Variable	Complete/Almost Complete Sentences Stage n=28
Age at Beginning of Stage (in Years)	
Mean	6.19
SD	2.79
Range	3 – 12.06
Did not respond	1
Age groups (Years)	
3-5	5
6-12	17
13+	5
Frequency of 3-4 Word Utterances	
Never-Rarely	0
Sometimes-Often	5
Most of the time-Always	23
Frequency of Sentences with a Verb	
Never-Rarely	1
Sometimes-Often	10
Most of the time-Always	17
Frequency of Correct Verb Tenses	
Never-Rarely	14
Sometimes-Often	10
Most of the time-Always	3
I don't know	1
Frequency of Correct Adjective Use	
Never-Rarely	10
Sometimes-Often	8
Most of the time-Always	9
Did not respond	1
Frequency of Correct Use of Questions	
Never-Rarely	4
Sometimes-Often	7
Most of the time-Always	17
Frequency of Correct Use of Negations	
Never-Rarely	3
Sometimes-Often	10
Most of the time-Always	14
I don't know	1

Six separate two-way contingency table analyses were conducted to evaluate performance by age. For analytical purposes, children reported to be in this stage were separated into the following age groups: 3-5 years of age (preschool), 6-12 years of age (school-age), and 13+ years of age (adolescence) (see Figures 6, 7, and 8). The frequency of 3- to 4-word utterances was significant, Pearson $\chi^2(2, N = 28) = 11.095, p = .004$, Cramer's $V = .641$. Follow-up pairwise comparisons were conducted to evaluate the difference among these proportions. The Holm's sequential Bonferroni method was used to control for Type I error at the .05 level across all three comparisons. Two pairwise differences were significant, including the preschool and school age children comparison ($p = .006$) and the school age and adolescent children comparison ($p = .001$), such that the school age children produced 3- to 4-word utterances more frequently in both comparisons. No significant differences were found between the other age groups.

The frequency of adjectives by chronological age was also significant Pearson $\chi^2(4, N = 28) = 11.651, p = .02$, Cramer's $V = .473$. Follow-up pairwise comparisons were conducted to evaluate the difference among these proportions. The Holm's sequential Bonferroni method was again used to control for Type I error at the .05 level across all three comparisons. Significant pairwise differences were found between preschool and both school age children ($p = .013$) and adolescent children ($p = .036$), such that the preschool age children produced adjectives significantly less frequently than both the school age and adolescent children. No significant differences were found between the other age groups in the frequency of use of utterances with adjectives.

The remaining tests examining the frequency of utterances with verbs and the frequency of correct use of verb tense, questions, and negations were not significant, Pearson $\chi^2(4, N = 28)$ range = 1.87-7.35, p range = .118-.760, Cramer's V range = .186-.369 (see Figures 6, 7, and 8).

Figure 6 demonstrates that a majority of children in both the preschool and school age groups were reported as using 3- to 4-word utterances most of the time/always and no children were indicated as using this feature never/rarely. Regarding the use of verbs only a small percentage of children in the adolescent group were indicated as never/rarely using this feature.

Figure 6

Frequency of 3- to 4-word Utterances and Utterances with Verbs According to Age

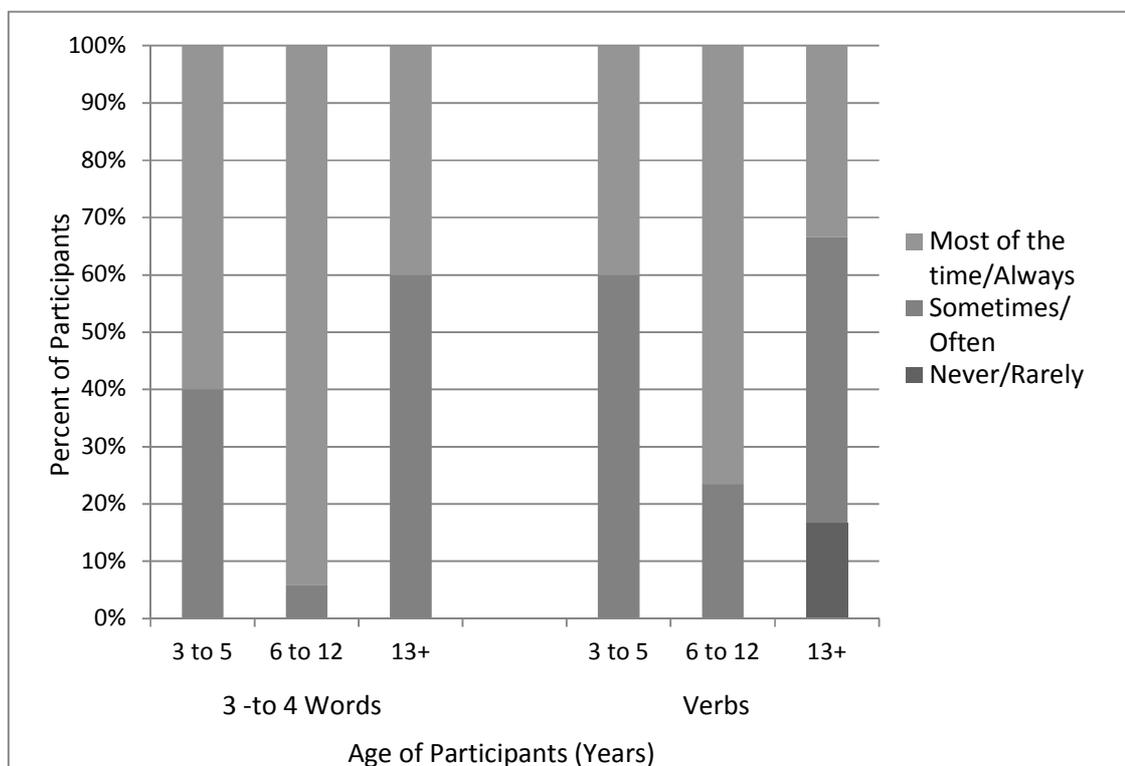


Figure 7 displays the findings that a majority of children in the preschool and adolescent age groups were reported as using the present/past tense correctly never/rarely and only a small percentage of children in the school age group were indicated as using this feature most of the time/always. In terms of the correct use of adjectives, Figure 7 shows the findings that indicate that all of the children in the preschool age group use this feature correctly never/rarely and a most of the children in the older age groups use this feature correctly at least sometimes/often.

Figure 7

Frequency of Use of Past/Present Tenses and Adjectives According to Age

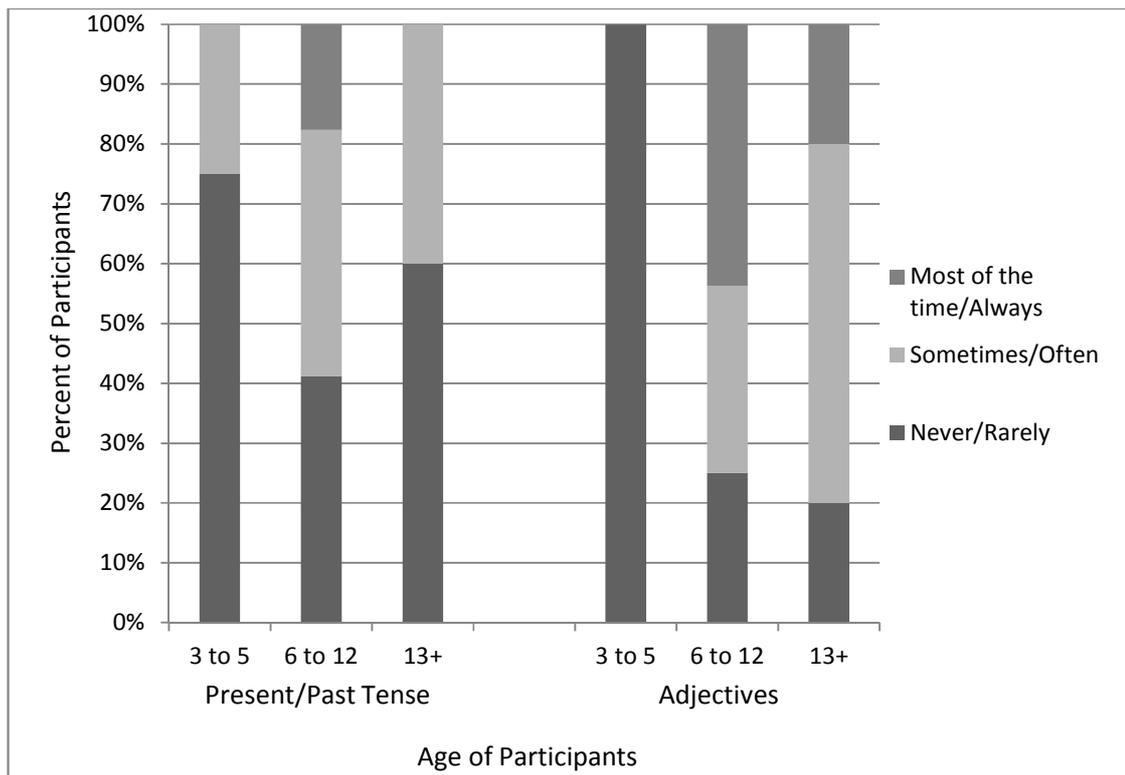
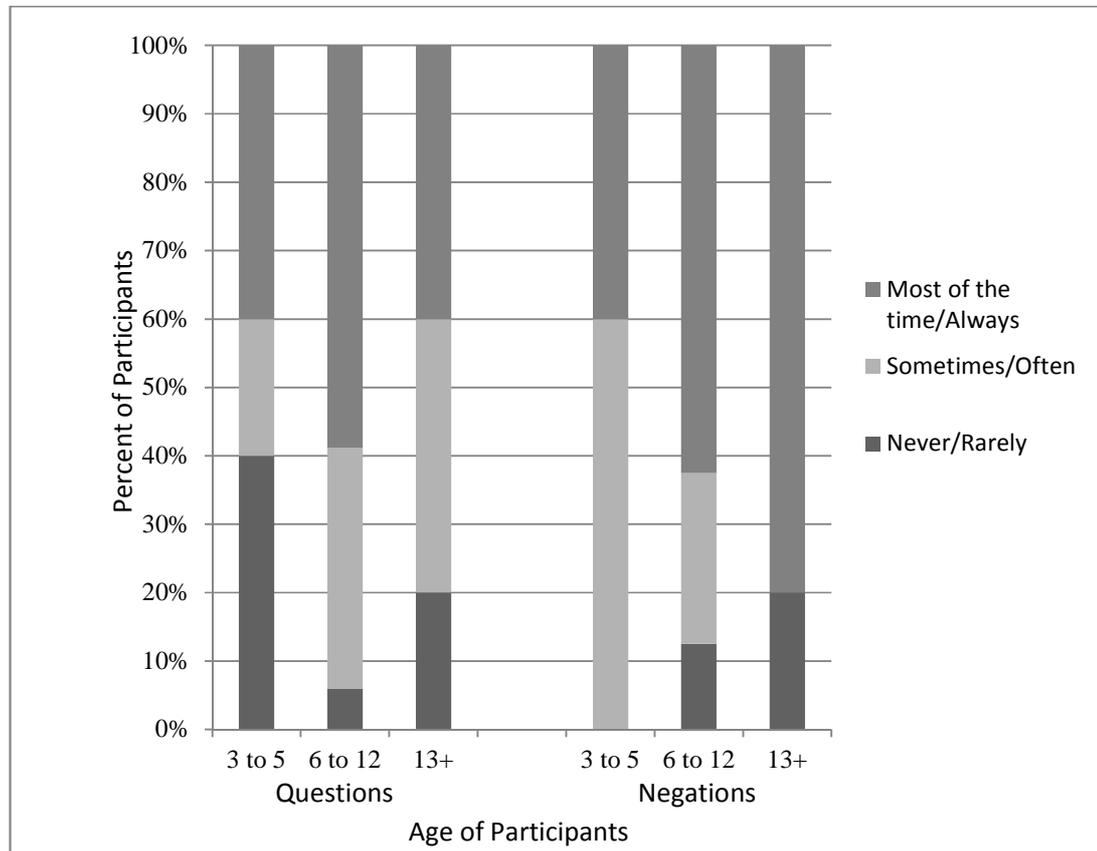


Figure 8 demonstrates the frequency of the correct use of questions and negations according to age. Most of the children in the school-age and adolescence groups were reported to use negations correctly most of the time/always, whereas a majority of the children in the preschool age group indicated that they use negations correctly with a frequency of sometimes/often. In terms of questions the highest percentage of children reported to be using this feature correctly with a frequency of most of the time/always were from the school age group (Figure 8). Approximately 40% of children in the other two groups (preschool and adolescence) were reported as using questions correctly with a frequency of most of the time/always (Figure 8).

Figure 8

Frequency of Use of Questions and Negations According to Age

Conversation Stage. Thirty-eight respondents reported that their child was in the conversational stage of language development (see Table 8). The average age of the children in this stage was 7.51 years (range = 3 to 15 years). Wilcoxon Signed-Ranks Tests were conducted to determine if there were statistically significant differences in the frequency of correct use of verb tense compared with adjectives as well as the frequency of correct use of idioms/metaphors compared with proper story sequencing. Wilcoxon Signed-Ranks Tests were also used to compare the frequency of correct use of questions, negations, and complex sentences in comparison with each other. Frequency was

considered in terms of parental ratings of never/rarely, sometime/often, and most of the time/always. Due to multiple comparisons, a Bonferroni correction was applied, resulting in a significance level set at $p = .01$ ($.05/5$). The frequency of correct story sequencing was significantly greater than the correct use of idioms and metaphors ($Z = -4.15, p < .001$). No significant difference was found between the frequency of utterances using the verb tenses correctly and the frequency of utterances using adjectives correctly ($Z = -2.11, p = .035$). Additionally, the frequency of questions was not significantly different than frequency of correct use of negations ($Z < .001, p = 1.00$), or the frequency of correct use of complex sentences ($Z = -1.27, p = .21$). There was also no significant difference between the correct use of negations and the correct use of complex sentences ($Z = -1.27, p = .21$).

Table 7
Conversational Stage Skills

Variable	Conversational Stage n = 38
Age at Beginning of Stage (in Years)	
Mean	7.51
Standard Deviation	2.90
Range	3 – 15
Age groups (Years)	
6-12	15
13-18	11
19+	12
Frequency of Correct Verb Tenses	
Never-Rarely	5
Sometimes-Often	12
Most of the time-Always	23
Frequency of Correct Adjective Use	
Never-Rarely	4
Sometimes-Often	7
Most of the time-Always	29
Frequency of Correct Use of Questions	
Never-Rarely	1
Sometimes-Often	17
Most of the time-Always	20
Frequency of Correct Use of Negations	
Never-Rarely	4
Sometimes-Often	11
Most of the time-Always	25
Frequency of Correct Complex Sentence Use	
Never-Rarely	4
Sometimes-Often	5
Most of the time-Always	21
Frequency of Use Idioms and Metaphors	
Never-Rarely	15
Sometimes-Often	18
Most of the time-Always	4
I don't know	1

Six separate two-way contingency table analyses were conducted to evaluate performance by age. Similar to the previous stages, children in the conversation stage were analyzed based on age groups. These children were separated into three distinct groups that included school-aged children (6-12 years old), adolescents (13-18 years old),

and adults (19 years old and above). None of the tests were significant, Pearson $\chi^2(4, N = 38)$ range = 3.38-8.71, p range = .07-.50., Cramer's V range = .21-.34 (Figure 9, 10, 11).

Figure 9 displays the findings concerning the frequency of the correct use of verb tense and adjectives according to the age groups specified (school age, adolescence, and adults). A majority of adults were identified as using both features most of the time/always. More than half of the children in the adolescence group were also identified as using these features most of the time/always, however this group was also identified as having the highest percentage of children who used these features never/rarely when compared with the other age groups.

Figure 9

Frequency of Verb Tense and Adjective Use According to Age

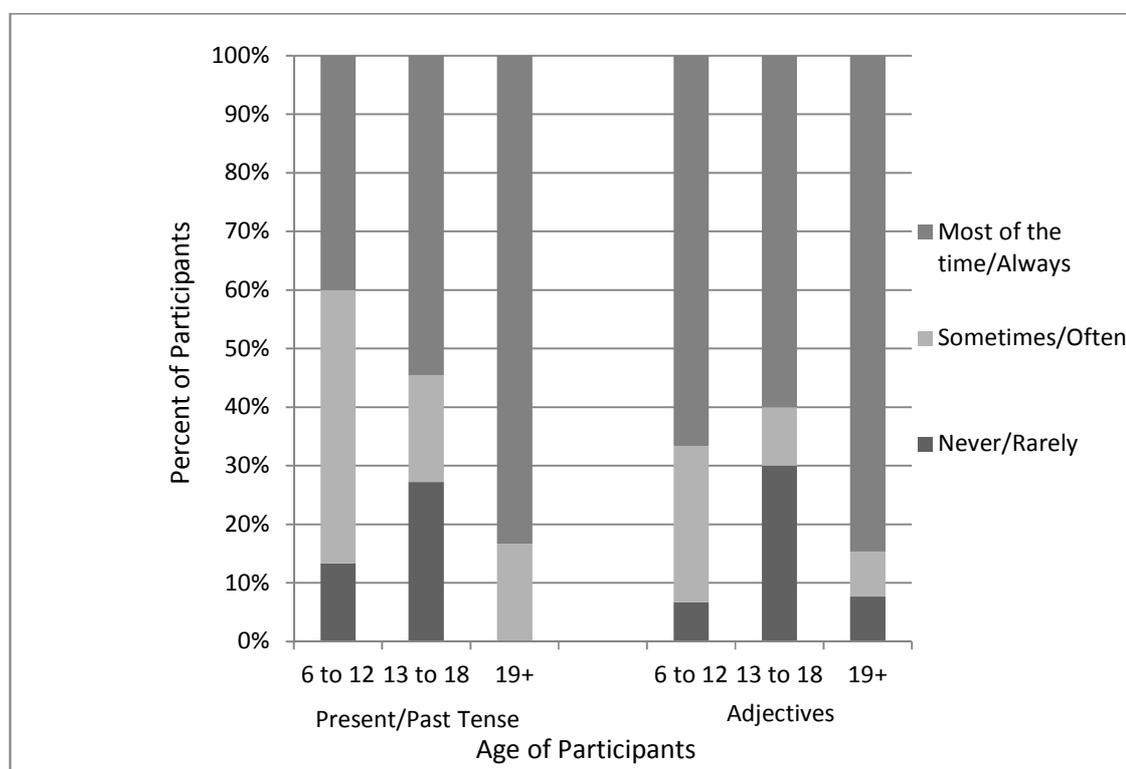


Figure 10 displays the findings of the frequency of use of questions, negations, and complex sentences based on age. A majority of the children in the adult age group were reported as using negations and complex sentences correctly most of the time/always, however a little less than half were reported to use questions correctly with this same frequency. Approximately 60% of children in the adolescent group were reported to use all of these features correctly with a frequency of most of the time/always, though this group reported the highest percentage of children to use complex sentences correctly never/rarely.

Figure 10

Frequency of Use of Questions, Negations, and Complex Sentences According to Age

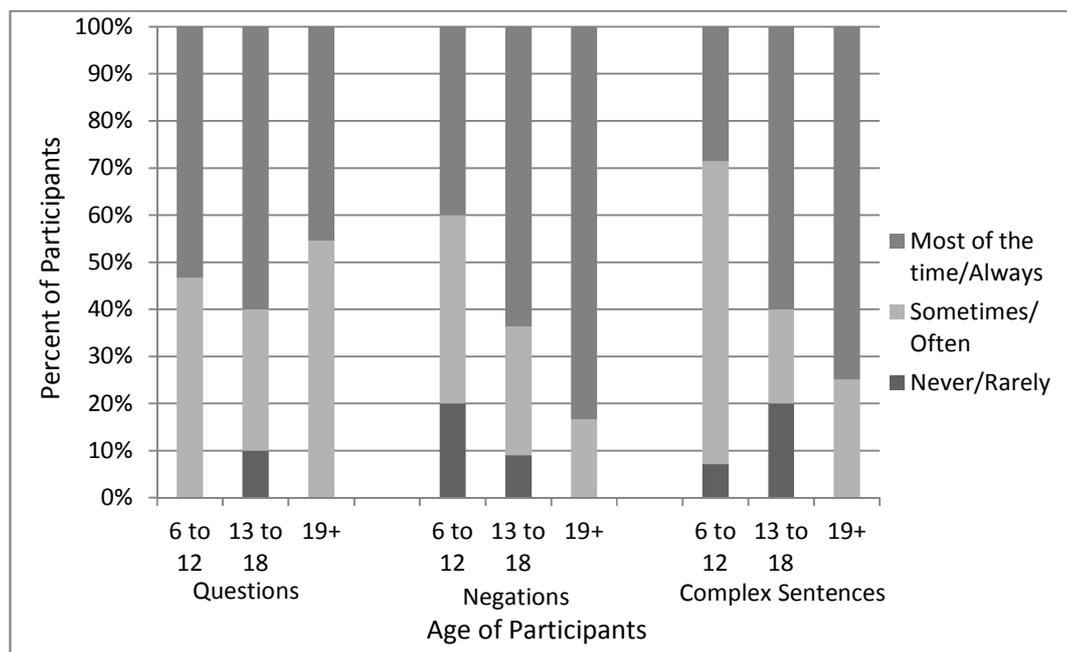


Figure 11 demonstrates findings regarding the frequency of correct story sequencing and correct use of idioms and metaphors according to the designated age groups. This figure displays that a low percentage (< 15%) of children in all age groups were reported as using idioms and metaphors correctly most of the time/always and a majority of children in the school age group were reported as using this feature never/rarely. In contrast approximately 20% of children in the school age and adolescent age groups were indicated as using correct story sequencing never/rarely. A majority of children in the adult age group were indicated as correctly sequencing stories most of the time/always.

Figure 11

Frequency of Correct Story Sequencing and Correct Use of Idioms & Metaphors

According to Age



Language Services for Children with Down Syndrome

Parents for 78 children (78.8%) reported that their child was currently receiving speech-language services. For 16 children (16.2%), parents reported that they were not currently receiving speech-language services. Five (5.1%) parents did not respond to the question (see Table 8).

Table 8.

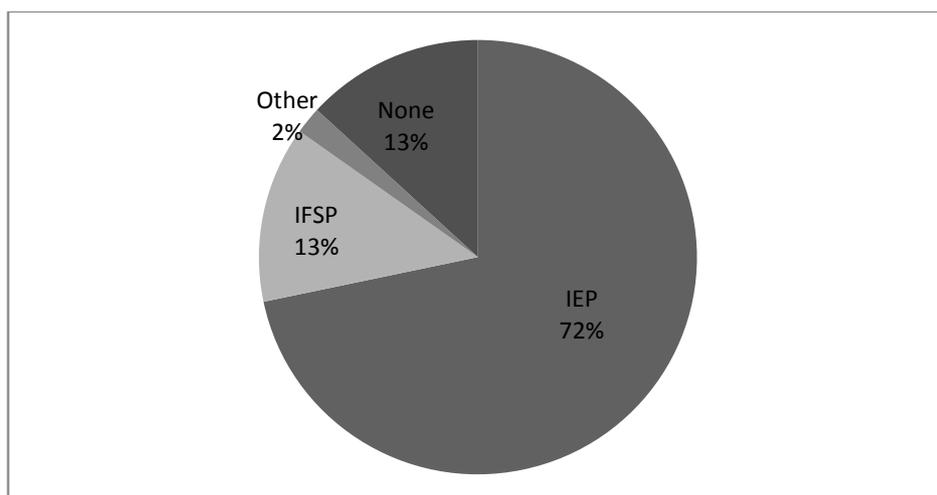
Current Speech/Language Services

Variable	STAGE			
	Early Words n=17	Combining Words n=16	Complete/ Almost Complete Sentences n=28	Conversation n=38
Receiving Speech Treatment				
Yes:No	16:0	13:2	27:1	22:13
Did not respond	1	1	0	3
IEP/IFSP (%)				
IEP	47.06	81.25	92.86	63.16
IFSP	47.06	12.5	3.57	5.26
Other	0	6.25	0	2.63
None	5.88	0	3.57	28.95
Services Location (% time)				
At home	35.31	18.75	7.59	9.77
Clinic/Hospital	19.38	10.83	15.93	19.73
School/Daycare	43.75	66.25	74.63	63.5
Other	1.56	4.17	1.85	7
Treatment Context (% time)				
Indiv. w/out caregiver	36.67	54.17	48.65	47.05
Indiv. w/ caregiver	55	25	5	14.29
Group w/out caregiver	6.67	21.83	45.48	36.29
Group w/ caregiver	1.67	0	.76	2.38
Goals				
# of goals per child (avg.)	2.86	2.7	2.67	3.28
Total # of goals reported	43	27	64	29
Appropriateness of Goals (Yes: No)	39:4	26:1	64:0	27:2
Did not respond	1	6	4	20

At each stage participants who indicated that their child received speech-language treatment were also asked to report on several aspects of their child's language services including whether or not their child had an individualized service plan such as an IEP or IFSP. Seventy-one participants (71%) reported that their child currently had an IEP and 13 participants (13%) reported that their child currently had an IFSP. Those who indicated that their child had no individualized service plan were represented by 13 participants (13%) across all stages (see Figure 12).

Figure 12

Types of Individualized Service Plans



The location and context of services currently received were reported by participants whose children were receiving speech-language services. To determine the locations (e.g., home, school/daycare, clinic/hospital) and contexts (e.g., individual or group with and without a caregiver) of therapy each child has received participants were asked to indicate the percentage of time that was spent in each location and to specify the context (see Table 9). First we examined if there were differences in service locations

regardless of language stage or age of participants using the Friedman test. This yielded a significant difference, $\chi^2(3, N = 77) = 82.86, p < .001$. Follow up pairwise comparisons were conducted using a Wilcoxon test with a Bonferroni correction such that $p = .008$ ($.05/6$). Each of the pairwise comparisons were significant (range $Z = -2.661$ to -6.735 , range $p < .001$ to $=.008$) with the exception of clinic versus home ($Z = -.102, p = .92$). The frequency of services provided at an “other” location was significantly less than each of the other locations ($Z = -2.11, p = .035$).

To determine whether language stage influenced the location of the language services that children received a Kruskal-Wallis test was completed for each of the four stages. None of the tests were statistically significant, $\chi^2(3, N = 77)$ range = 1.24-5.47, p range = .14-.74.

The differences in location according to age were also analyzed. The four age groups analyzed included preschool (0 to 5 years old), school-age (6 to 12 years old), adolescents (13 to 21 years old), and adults (22 years old and above). Due to multiple comparisons, a Bonferroni correction was applied, resulting in a significance level set at $p = .01$ ($.05/4$). No significant differences were found for home, clinic, or school, $\chi^2(3, N = 75)$ range = .45-7.96, p range = .05-.93. A significant difference was found for the “other” location, $\chi^2(3, N = 75) = 17.01, p = .001$. Follow-up Mann-Whitney U tests were conducted to evaluate pairwise differences among the four age groups. A significant difference was found between the adults and each of the following groups: the preschool group, school-age group, and the adolescent group, z range = -3.05 to $-3.74, p$ range =

.001-.002 characterized by the adults having greater frequency of “other” location than the other groups.

The context of services was analyzed to further examine the type of language services children with Down syndrome were receiving. These contexts included individual therapy with a caregiver, individual therapy without a caregiver, group therapy with a caregiver, and group therapy without a caregiver (see Table 9). To assess whether there were significant differences regarding the frequency of the indicated contexts of services that children were receiving regardless of language stage or age a Friedman test was completed. This yielded a significant difference, $\chi^2(3, N = 74) = 82.86, p < .001$. Follow up pairwise comparisons were conducted using a Wilcoxon test with a Bonferroni correction such that $p = .008 (.05/6)$. Each of the pairwise comparisons were significant (Z range = -2.816 to -5.991, $p < .001$) with the exception of group therapy without a caregiver present and both individual therapy contexts ($Z = -1.326$ and $-1.569, p = .117$ and $.185$, respectively). Group therapy with a caregiver present occurred significantly less than the other service contexts (Z range = -4.367 to -5.991, $ps < .001$), and individual therapy with a caregiver present occurred significantly less than individual therapy without a caregiver ($Z = -2.816, p = .005$).

Comparisons of treatment contexts according to language stage were analyzed using a Kruskal-Wallis test. A Bonferroni correction was applied, resulting in a significance level set at $p = .01 (.05/4)$ to account for multiple comparisons. A significant difference was found for individual therapy with a caregiver and group therapy without a caregiver, $\chi^2(3, N = 74) = 11.41-12.15, p = .007-.010$. Follow-up Mann-Whitney U tests

were conducted to evaluate pairwise differences of individual therapy with a caregiver and group therapy without a caregiver among the four stages. A significant difference was found between the single words and complete sentences stages for both individual therapy with caregivers present and group therapy without caregivers present, z range = -3.119 to -3.263, p range = .001-.002. This difference was characterized by children in the single words stage participating in more individual therapy with caregivers present and children in the complete sentences stage participating in more group therapy without a caregiver present. A significant difference was also found between the single words and conversation stages for group therapy without a caregiver present, $z = -2.627$, $p = .009$, characterized by children in the conversation stage participating in group therapy without a caregiver present more often. No significant differences were found for individual therapy without a caregiver present or group therapy with a caregiver present, $\chi^2(3, N = 74)$ range = .80-.1.38, p range = .71-.85.

Finally, the differences in the frequency of the indicated contexts of therapy according to age were analyzed using a Kruskal-Wallis test for each of the four age groups. Due to multiple comparisons, a Bonferroni correction was applied, resulting in a significance level set at $p = .01$ (.05/4). None of the tests were statistically significant, $\chi^2(3, N = 74)$ range = 1.01-10.01, p range = .02-.80.

The number of treatment goals for each child was analyzed using two-way contingency table analyses across language stages and specific age groups. No statistical significant differences were found for stage, Pearson $\chi^2(12, N = 67) = 13.319$, $p = .408$,

Cramer's $V = .346$ and age, Pearson $\chi^2(12, N = 67) = 16.748, p = .132$, Cramer's $V = .159$.

Parent Involvement in Language Interventions

Each of the 78 participants who indicated that their child was receiving language services were also asked to indicate their involvement in therapy. Levels of involvement included not involved, observed sessions, participated in sessions, received training, and implemented treatment outside of therapy. Participants were allowed to mark each of these options that applied to their involvement (see Table 9). The types of parent involvement for each child were analyzed using three involvement groups: not involved or observes only, participates in sessions, and received training or implements techniques.

The three parent involvement groups were analyzed regardless of language stage or age group using a one-sample chi-square test. No statistical significance was found, $\chi^2(2, N = 73) = 4.795, p = .091$.

To examine whether parent involvement during language intervention was influenced by the child's language stage, a two-way contingency table analysis was completed. This test yielded a statistical significant difference, Pearson $\chi^2(6, N = 73) = 12.725, p = .05$, Cramer's $V = .295$. Follow-up pairwise comparisons were conducted to evaluate the difference between the different levels of parental involvement. The Holm's sequential Bonferroni method was again used to control for Type I error at the .05 level across all four stages. Two pairwise comparisons yielded statistically significant differences between parents of children in the complete sentences stages and both parents of children in the single words and combining words stages (p range = .003-.023). The

remaining tests examining parent involvement between the other stages were not significant, Pearson $\chi^2(2, N \text{ range} = 26-47) \text{ range} = 1.23-3.75, p = .154-.541$.

Follow-up pairwise comparisons were completed to assess differences in parental involvement between the complete sentences stage and both the single words and combining words stages. For the complete sentences and single words stages, analyses were significant for the not involved/observes level of involvement as well as the training/implements treatment level of involvement, Pearson $\chi^2(2, N = 28 \text{ and } 25) = 15.556 \text{ and } 11.049, p < .001 \text{ and } p = .004$, Cramer's $V = .745 \text{ and } .665$, respectively. These differences were characterized by parents of children in the complete sentences stage indicating that they were not involved more often than parents of children in the single words stage. The parents of children in the complete sentences stage also indicated that they received training and implemented therapy techniques outside of therapy more often than parents of children in the single words stage.

A significant difference was found when comparing parents of children in the complete sentences stage with parents of children in the combining words stage regarding the not involved/observes level of involvement and the training/implements treatment level of involvement as well, Pearson $\chi^2(2, \text{range } N = 26 \text{ and } 23) = 13.481 \text{ and } 16.218, p = .001 \text{ and } p < .001$, Cramer's $V = .720 \text{ and } .840$. This difference was characterized by parents of children in the complete sentences stage specifying that they were not involved and that they received training and implemented therapy techniques more often than parents of children in the combining words stage.

There was no significant differences in those who indicated that they participate in their child's therapy between the complete sentences stage and both the single words and combining words stages, Pearson $\chi^2(2, N = 15 \text{ and } 13) = 1.607$ and $.929$, $ps = .448$ and $.629$, Cramer's $V = .327$ and $.267$, respectively.

To determine whether child's age influenced parent involvement during language interventions, a two-way contingency table analysis was completed. No statistical significance was found, Pearson $\chi^2(6, N = 71) = 9.059$, $p = .17$, Cramer's $V = .253$.

Table 9

Parent Involvement in Current Speech Treatment According to Language Stage

	STAGE			
	Early Words n = 16	Combining Words n = 13	Complete/Almost Complete Sentences n = 27	Conversation n = 22
Caregiver Involvement (%)				
Not involved/Observes Session	5	8	18	12
Participates in some/most sessions	8	8	7	8
Received training/ Implemented interventions	8	2	12	12

Parents' Perceptions of the Benefits of Speech-Language Services

Across stages caregivers were asked to rate the level of benefit of the speech-language services their child was receiving at the time of survey completion (see Table 10). Responses were categorized as either not beneficial (parent responses of not beneficial or gains limited to therapy) or beneficial (parent responses of helped with communication but regressed or helped with communication outside of therapy). These ratings were analyzed regardless of language stage or age group using a one-sample chi-

square test. Statistical significance was found, $\chi^2(2, N = 73) = 38.479, p < .001$, characterized by more parents specifying that their child's speech and language services were beneficial to their communication than not beneficial.

To assess whether parents' perceptions of the benefits of their child's language services were influenced by the child's language stage, a two-way contingency table analysis was completed. No statistical significance was found, $\chi^2(2, N = 73) = 3.054, p = .383$. Additionally, the influence of the child's age on parents' perceptions of the benefits of language services was also examined using a two-way contingency table analysis. No statistical significance was found, $\chi^2(2, N = 73) = 1.978, p = .577$.

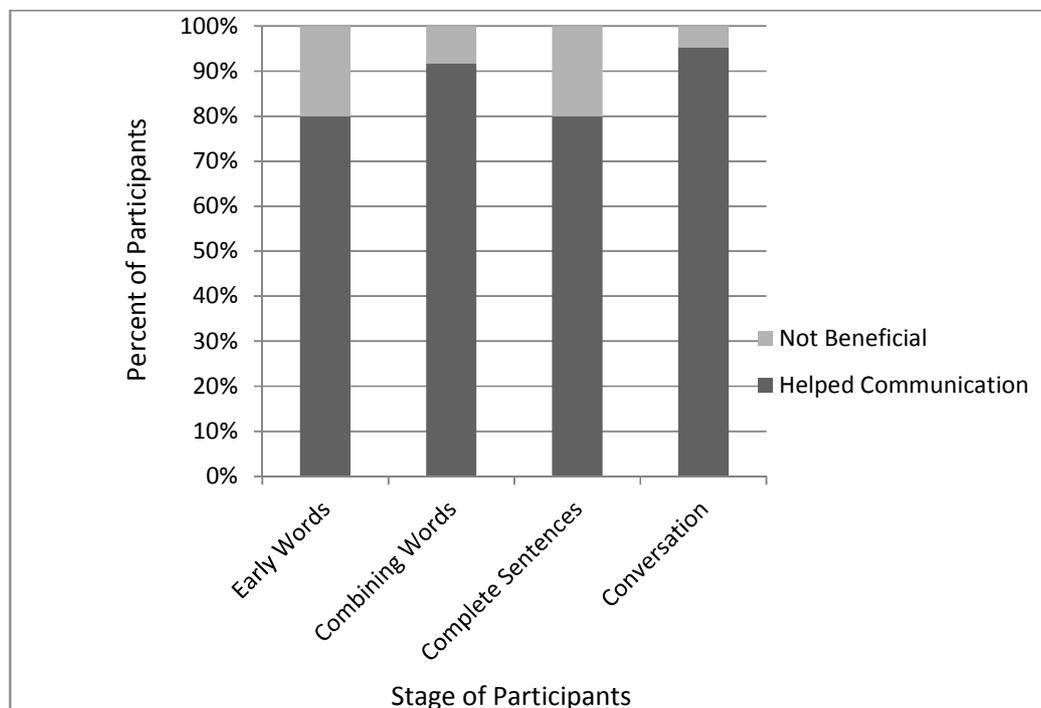
Table 10

Parent Perceptions of Language Treatment Benefits According to Language Stage

	STAGE			
	Early Words n=16	Combining Words n=13	Complete/ Almost Complete Sentences n=27	Conversation n=22
Services Benefits				
Not beneficial/ Limited gains made	3	1	5	1
Made gains but regressed/ Helped communication	12	11	20	20
Did not respond	0	1	2	1

Figure 13 displays the parents' indication of how beneficial their child's current language services are based on the child's stage. As shown in this figure most of the parents survey indicated that their child's current language services are beneficial, and the highest percentage of parents who considered their child's services to not to be beneficial had children in the early words and complete sentences stages.

Figure 13

Parent Perception of Current Language Services**Discussion**

The analyses of parents' perceptions concerning the language abilities of their children with Down syndrome and the services their children receive provide important insight regarding the language development of children with Down syndrome and service delivery. These findings and their significance are highlighted below as well as the limitations and clinical implications of this study. Suggestions for future research are also given based on the findings of this study to encourage further understanding of the language abilities and services provided for children with Down syndrome and parent perceptions regarding these topics.

Parents' Perceptions of their Child's Language Development

Findings from this study reveal that across the five language stages analyzed, there is significant variability in the chronological ages and language abilities of children with Down syndrome. Specifically, some children demonstrate mild delays relative to age expectations, while other children remain in early stages of language development well into adolescence and adulthood. The language abilities examined in each stage help to characterize the skills of these children relative to expectations based on what is known regarding typically developing children in the same language stages.

Early Words Stage. Children with typical development in the early words stage of language development tend to range in age from 12 to 24 months. In the current study, parents indicated that their child with Down syndrome in this stage of language development ranged in age from 16 months to 19 years with similar numbers of 1-, 2-, and 3-year-old children as well as children who are 5 years and older. This demonstrates a wide age range relative to typically developing children.

It was predicted that children in this stage would be described as comprehending more spoken words and signs than they were producing, and that they used more signs than spoken words. As expected, parents of children in this stage of language development reported that their child comprehends significantly more spoken words than they produce. Counter to expectations, parents reported that their child comprehends significantly more spoken words than signs and reported no differences in the production of spoken words and signs. Previous studies have demonstrated that the use of signs and

gestures are a relative strength among children with Down syndrome, however based on the parental reports in the current study, this strength was not present for most children.

These results suggest a limitation in overall vocabulary (both oral words and signs) across age groups and correspond with previous study findings that initial vocabulary tends to develop at a slower rate in children with Down syndrome (Berglund, et al., 2001; Hart, 1996). Moreover, the results of the current study indicate that the limited vocabulary demonstrated by children in this stage is not due to differences in chronological age. Given these findings, it is important to recognize that a decreased overall vocabulary during early development can extend beyond the early words stage limiting the advancement of later language skills.

Combining Words Stage. When comparing parental reports of the performance of their children with Down syndrome in the combining words stage to typical expectations, a discrepancy is present. Children with typical development typically begin combining words between 18 and 24 months of age and remain in this stage until early preschool age. The children with Down syndrome specified as being in the combining words stage were between 29 months to 42 years old indicating that while some children seem to be on par with their typically developing peers others tend to be delayed in their advancement to the next stage of language development. It is important to note, however, that there were no children between the ages of 6 and 12 who were reported as being in this stage. This may signify that those children with Down syndrome who advance to the next stage of language development typically do so by 6 years of age.

It was predicted that parents of children in this stage would report that their child has difficulty with more advanced syntactic structures. The significant differences that were found regarding the frequency of use of 2-word utterances, verbs, and questions demonstrate a higher frequency of use of 2-word utterances and verbs in relation to questions. The production of questions is a more complex feature of language which was produced significantly less frequently than less complex features such as 2-word utterances and verbs confirming the prediction made that more complex language features would be used less frequently by children in this stage.

The predictions made concerning the language skills according to age suggested that parents would perceive older children as using more advanced language skills than younger children in the combining words stage. In the current study there were no significant differences among the different age groups when comparing their use of specific language skills, which may suggest that these skills do not gradually improve with age. Alternatively, the lack of differences across ages could potentially be due to small sample size given that there were only 16 parents of children in this stage who completed the survey or inconsistencies in parental reports in terms of how the questions presented in the survey were interpreted by each parent respondent.

Almost Complete Sentences Stage. When examining the language abilities of children with Down syndrome in comparison with typically developing peers in the same language stage, several differences are noted. Children with typical development typically reach this stage in preschool whereas most children with Down syndrome in this study reached this stage by school age.

Comparisons made between school-age children with Down syndrome and preschool-age children with typical development indicate that children with Down syndrome have particular difficulty with syntax development, specifically grammatical morphemes relating to tense according to several studies (Eadie, et al., 2002; Joffe & Varlokosta, 2007). Thus, it was predicted that children with Down syndrome would have more difficulty with more advanced syntax particularly verb tense. In line with this prediction, in this study, across all ages of children with Down syndrome in this stage, it was found that individuals with Down syndrome are less likely to produce utterances with a verb than 3- to 4-word utterances. This may be indicative that children with Down syndrome tend to produce more simplistic utterances using more words than in the combining words stage.

A significant difference was also found when comparing the frequency of 3- to 4-word utterances at different age groups. Parents of school-age children responded that their child uses 3- to 4-word utterances more frequently than parents of preschool age children and adolescents. Thus, although some children with Down syndrome progress to this stage of language development at preschool age, like their typically developing peers, they do not produce 3- to 4-word utterances, as frequently as older children with Down syndrome in the complete sentences stage. When considering the frequency of 3- to 4-word utterance use among adolescents with Down syndrome, previous studies have suggested that longer and more complex utterances tend to be more unintelligible in children with Down syndrome (Bray & Woolnough, 1988; Martin, et al., 2009). Because shorter and simpler utterances tend to be understood more easily, younger children with

Down syndrome may be adapting their communication styles to allow for their message to be conveyed more easily. Studies have also shown that parents understand their child with Down syndrome more often than unfamiliar listeners (Kumin, 1994). Thus, parents of older children with Down syndrome have had more time to adapt to their child's speech patterns and may be able to more accurately indicate the nature of their child's language.

Parents of adolescents with Down syndrome reported that their child uses adjectives more frequently than preschool-age children with Down syndrome. One possible explanation for this finding is that the older children have had more exposure to adjective use and have developed a larger repertoire of adjectives.

The frequencies of use of other language features such as correct verb tense use and the use of questions and negations were not significantly different when compared based on age. However, it is important to note that only a few participants indicated that their child used this skill with a frequency of most of the time or always. Therefore, this study demonstrates similar findings to previous studies that children with Down syndrome have difficulty with the use of grammatical morphemes (Chapman, 1997; Eadie, et al., 2002; Finestack & Abbeduto, 2010).

Conversation Stage. Children with Down syndrome in the conversation stage continue to demonstrate discrepancies in their language abilities compared to children with typical development. For children with typical language development, this stage is characterized by the use of more complex language skills within both conversational and narrative contexts. Although children with typical development tend to reach this stage in

preschool, the more advanced skills established in this stage continue to develop into school age and adolescence. Children with Down syndrome continue to demonstrate difficulty with more complex syntax as identified in the complete sentences stage, and they typically do not reach the conversation stage until adolescence (Finestack & Abbeduto, 2010; Keller-Bell & Abbeduto, 2007).

This study found that across all ages, children with Down syndrome correctly sequenced stories more frequently than they correctly used idioms and metaphors, a more advanced feature of language development. Previous studies indicate that narrative language skills are strong in children in the conversational language stage (Boudreau & Chapman, 2000; Keller-Bell & Abbeduto, 2007), which may contribute to the report of a higher frequency of narrative language.

Study results also indicated that there were no significant differences in the use of questions across age groups. Across age groups, almost all children were producing questions; thus, it appears that children in this stage are able to use these more complex forms. This may indicate that the use of questions is an expectation of more advanced language and is targeted more often in treatment than in the almost complete sentences stage.

It was predicted that the more complex features of language would be used less frequently than simpler language skills by children with Down syndrome in this stage. These predictions were confirmed regarding the use of complex language skills such as idioms and metaphors which were indicated by parents as being used correctly significantly less frequently than the correct story sequences. This finding may also be

attributed to the likelihood that narrative language skills are targeted more often in treatment than figurative language. However, this prediction was not supported by results examining the frequency of correct use of complex sentences in comparison with verb tense in which there was no significant difference in use. This lack of a significant difference may be due to the use of gross measures included in the survey. The survey examined language features at a general level (e.g., complex sentences, verb tense, etc.) instead of examining particular aspects of morphology and syntax (e.g., use of “-ed” and “-ing,” use of conjunctions). Significant differences may exist based on more fine-grained measures rather than the more general concepts examined in this study.

Language Services for Children with Down Syndrome

Of the 99 parent participants, 78 indicated that their child was currently receiving speech-language services. These services varied in service plan type, location, and context. The distribution of IFSPs and IEPs was largely based on the age of the child with Down syndrome as is mandated by educational programming. The differences in location and context varied based on several different factors.

Regardless of the language stage and the age of the child, study results indicated that the frequency of services at the location labeled as “other” was significantly less than the alternative locations listed. Parents were given the opportunity to indicate the type of location that they considered as “other,” which led to responses that included university clinics, private therapy, a therapy center, horse therapy, and a private pool. It is important to consider that some parents may have selected the hospital/clinic option for university clinics and private therapy instead of the “other” label. Despite this, most therapy

locations were well represented across the options provided (i.e., school/daycare, home, hospital/clinic).

Parents of children with Down syndrome in the adult group (21 years and above) selected the “other” location label more frequently for than the younger age groups. Most likely this is because adults with Down syndrome no longer receive services through public educational services and thus receive more heterogeneous and atypical speech and language services.

According to the responses to our survey, parents participated in therapy sessions infrequently across all age groups. Specifically, both individual and group therapy with a parent present was utilized much less frequently than the other service types, regardless of the stage or age of their child. This finding isn’t surprising given that the majority of parents reported that their child was school-age and parent involvement is limited in the school setting (Eccles & Harold, 1993).

Although no significant differences were found based on the context of therapy according to the child’s age, there were significant differences between the individual therapy with a caregiver and group therapy without a caregiver across the different stages analyzed. The differences found suggest that children in the single words stage participate in individual therapy with a caregiver present more frequently than children in the complete sentences stage. This finding may be attributed to the greater availability of opportunities for parents to participate in the earlier stage based on the likelihood that these services are received outside of a formal school setting. Children in the single words stage also may have more individual needs that cannot be addressed as easily in a

group setting therefore requiring more individual services than those provided for children in the complete sentences stage. A greater number of children in this stage were also reported as having an IFSP based on their age, which may contribute to more individualized goals and family-related services that are not conducive to group treatment.

Results also indicated that significantly more children in the conversational stage received group therapy without a caregiver present than children in the single words stage. The majority of children were reported as receiving services in a school setting. A school setting may provide more opportunities for children to receive therapy with a group, due to the presence of peers and more flexibility in the time a child may be scheduled to receive group services than when outside of school. Additionally, the skills addressed in the conversation stage as opposed to the single words stage may require more opportunities for the use of different communication partners. It is implied that children in the conversation stage are able to converse with others whereas children in the single words stage may not have the skills necessary to address their goals through peer interactions.

Parent Involvement in Language Interventions

Parent involvement was analyzed to better understand the role of parents in therapy. Parents' involvement in their child's language interventions did not differ significantly based on the child's chronological age. However, there were significant differences in involvement based on language stage. Specifically, parents of children in the complete sentences stage indicated more often that they observed or were not

involved in therapy sessions than parents of children in the earlier stages. The only exception to this being that parents of children in the complete sentences stage reported that they received training and implemented techniques outside of therapy more often than parents of children in the combining words stage. Considering these findings begs the question as to why parents of children in the complete sentences stage are receiving more training and implementing therapy techniques more than parents in the other stages. Given that children in the complete words stage tended to be older than children in the combining words stage, one plausible explanation for this finding may be that the older children are more compliant to participating in therapy techniques implemented at home.

Parents Perceptions of How Language Is Benefited by Services

Parents with children across all ages and stages of language development indicated that they feel that their child's speech and language services are beneficial to their communication development. There were no significant differences found based on stage or age of the child. Although most parents indicated that they consider their child's language services to be beneficial, it is important to note that those parents who did not consider their child's language services to be beneficial most frequently indicated that gains made were limited to therapy. The language stages with the most dissatisfaction reported were the early words stage (18.75%) and the complete sentences stage (18.5%).

In addition to responses concerning the benefits of language treatment, parents were asked to comment on the appropriateness of their child's speech-language goals. Three participants with school-age children in the single words stage reported that the goals for their child regarding communication were not appropriate. Goals that were

identified as not appropriate included those targeting the use of a simple AAC device and self-esteem. The participant who indicated that the goal addressing AAC device use was not appropriate noted that use of the device was impractical. The parent who cited self-esteem as an inappropriate goal stated that “more skills need to be taught.” This response may imply that although this goal addresses a specific need of a child with Down syndrome, the treatment used to facilitate the growth of these skills is not adequate.

One parent also specified that their child’s goal addressing “communication” was not appropriate. This parent indicated that their child “needs to learn sign language skills not [currently] taught.” Because the language goal specified by the parent was vague, it is possible that there is a lack of understanding by the parent regarding the specific goals that are targeted in their child’s therapy. This lack of knowledge regarding specific language goals may be attributed to a lack of communication between the child’s speech language pathologist and his or her parents or a low level of parent involvement in the child’s therapy. Because of the discontent with language services in the single-word stage, services specific to these stages should be further analyzed and alternate interventions should be considered and researched.

Because the speech and language goals addressed in treatment are generally individualized to fit a child’s specific needs, parents’ concerns regarding these goals are expected to be more specific to the goals that their child may be addressing in treatment. In order to obtain a more accurate picture of parents’ more specific concerns, parent responses to open-ended questions regarding the appropriateness of goal addressed in therapy were considered. One participant with a child in the combining words stage

indicated that one goal focusing on the use of the Picture Exchange Communication System was not appropriate for their child. It was stated that this goal was inappropriate because “we know he has the ability to speak that using a picture system doesn't really help in that.” In another case, a parent of a child in the conversation stage indicated that the goals addressed in therapy were not appropriate. The child, an adolescent, was reported to be working on social speech and appropriate use of humor. According to the parent both goals were inappropriate because they “don't see this as a problems, but speech therapist was not sure what else to do since his spoken [language] is so strong.” Despite the dissatisfaction with these particular goals, both participants reported that overall the language services their children are receiving are beneficial to their communication abilities. The current study's findings support the notion that although parents may be overall satisfied with the language services that their child is receiving, they still may have concerns or dissatisfactions with these services.

Limitations

This study was based on a survey sent to organizations throughout the United States to obtain information about children with Down syndrome. However, responses were not equally obtained from all regions in the United States. Specifically a majority of respondents reported that they were residing in the Midwest (41.4%) followed by the Southeast (27.3%). The fewest number of participants indicated that they were from the Southwest (1%) and the West (11.1%). Thus, it is likely that there are biases in responses based on services provided in specific regions.

It is also important to note that the language stages of the children of parents surveyed were not represented equally. Most children were reported to be in the complete sentences stage (28.3%) and the conversation stage (38.4%) stages and a fairly equal number of children were reported to be in the early words stage (17.2%) and the combining words (16.2%) stage. The prelinguistic stage was not represented in this study; therefore, parent perceptions of the language abilities and services provided for children in this stage could not be analyzed. It is likely that parents of children in the prelinguistic stage of language development felt that they were not eligible to complete the survey because their child was not yet speaking.

The different age groups were also not equally represented which may attribute to some bias as well. Overall, a majority of children were indicated as being in the school age group (38.9%) followed closely by the preschool (29.5%) and the adolescent (21.1%) groups. The adult group was represented by the smallest number of respondents (10.5%). This may contribute to a bias towards language services provided for children who are in school compared with adult children who no longer qualify for school-related services. Responses must be considered in respect to these sampling limitations and future studies should target more heterogeneous geographic regions and have greater representation of language stages and ages in order to limit the biases that may come from over- or under-representation of specific groups.

Regarding the acquired survey responses there are several considerations that should be made when interpreting the findings of this study. Because a survey of parents was utilized, accurate and complete language profiles may not have been attained. In

regards to their child's specific language skills, parents may have more or less opportunities to observe their child's specific language skills therefore influencing reports regarding the frequency of the specific skills addressed. Some parents may also over- or underestimate their child's abilities in relation to specific skills based on their specific concerns and biases. Moreover, some responses may be over- or underestimates of their child's abilities due to misinterpretation or misunderstanding of the survey question.

The study survey aimed to obtain a broad understanding of the language abilities of individuals with Down syndrome. Therefore, the survey questions did not address highly specific language skills and perceptions of fine-grained language skills were not obtained. Such information may have been more sensitive to language stage and age group differences. However, it is impossible to address all aspects of language development within a single survey due to time constraints related to participant compliance. Importantly, the design of this survey successfully facilitated the analysis of parents' perceptions of several known general language skills in each stage of language development as well as the language services provided addressing the development of these skills. This study's aim to gain an understanding of parents' perceptions regarding both the language skills and services for children with Down syndrome was achieved through the study analyses.

Clinical Implications

Parents' perceptions of both language abilities and language services are crucial when considering how to approach language treatment for children with Down syndrome. Thus, results of this study will help clinicians to better serve children with Down

syndrome and will help researchers focus on aspects of language development and intervention that parents identify as areas of weakness.

As expected, parents perceived their child's language skills as less developed than would be expected in each age group compared to expectations associated with typical development. The ages of the children varied in each stage indicating that there are vast individual differences in language abilities among children with Down syndrome. The findings regarding the skills demonstrated by children with Down syndrome in each stage as reported by their parents were similar to the findings of the aforementioned research studies across each stage and age group.

Findings from the current study as well as the findings from previous studies can help to identify common problem areas for children with Down syndrome and encourage more interventions geared towards these areas of concern earlier in development. For example, findings of children in the early words and combining words stages of language development suggest that, depending on a child's individual needs, clinicians working with children in these stages should consider targeting early word production and the production of questions. Additionally, regarding the complete sentences and conversation stages studies examining interventions targeting more complex syntactic features such as verb tense and complex sentence production should be considered.

Understanding the types of services that children with Down syndrome are receiving is also important when aiming to improve the language services that these children receive. According to this study, a majority of children with Down syndrome are receiving language services in school and daycare settings. Therefore, it is crucial for

clinicians and researchers to develop and implement efficient and effective language interventions that can be applied in a school setting.

Regarding parent involvement, this study demonstrated that parent involvement varies across language stages and age groups. Through better understanding the levels of involvement at each stage, clinicians may choose to develop a therapy plan that encourages an increased level of parent involvement in the stages where involvement was more limited yet desired. Regardless of stage and age, however, clinicians should be encouraged to incorporate more activities that can be utilized by parents outside of the therapy sessions to encourage the progression and generalization of language skills.

Finally, it is important for clinicians to recognize parents' perceptions regarding how beneficial they consider their child's language services and their overall satisfaction with treatment. By obtaining parent's feedback regarding their child's language treatment, the clinician can be more aware of areas of concerns. Thus, clinicians can adapt the services that they are providing to better meet the child's individual needs based the parental feedback. Utilizing parents' feedback, clinicians can increase parents' involvement in their child's language services which may lead to increased generalization of skills addressed in therapy to the home. Additionally, clinicians can use questions similar to the questions utilized in this study's survey to better understand areas of concern that parents may have regarding their child's therapy.

Future Research

Based on the information acquired in this study in addition to previous research, there are several areas that require further research regarding the language abilities and

services for children with Down syndrome. In future studies, to obtain more complete information regarding language abilities of children with Down syndrome the child's speech-language pathologist should be questioned in conjunction with parents. Ideally, in conjunction to parental and clinician surveys, future studies should include a direct assessment of the child's cognitive and language abilities. The information obtained in this type of study would more accurately determine if there are discrepancies between the parents' views and the speech-language pathologists' views and the child's language abilities.

If utilizing surveys, there are several modifications that should be addressed in future studies. For example, to obtain a more complete understanding of parents' views of the language profiles of their child, future studies should ask more detailed questions regarding the specific language skills in each stage of language development. Additionally, efforts should be taken to ensure participants well represent geographical regions, as well as children with Down syndrome of all ages and stages of language development.

Concerning the language services of children with Down syndrome, it is important to use the knowledge of children's language abilities to promote more specific language interventions at each language stage, particularly the later language stages. Because these children have been reported to have more individual concerns regarding their language skills, it is also important to encourage research to develop interventions that can be more individualized to fit each specific child's needs. Based on previous research and the findings from this study, future research should address the overall

parent involvement in language treatment, particularly in the four language stages examined in this study. Previous research indicates that parent training is utilized in the prelinguistic stage (Baxendale & Hesketh, 2003; Girolametto, 1998; Yoder & Warren, 2002); however, the effectiveness of parent involvement in later stages of development has not been examined.

This study in conjunction with previous research highlights the importance of continued research examining the language abilities and interventions provided for children with Down syndrome has. This study opens the door to future exploration of the perceptions of parents of children with Down syndrome. By utilizing the information obtained in this study, future research can be completed to better understand the language abilities of children with Down syndrome from the perspective of the parents and better meet the needs of children with Down syndrome.

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Appendix A

Study Survey

Thank you for taking part in this survey. Just to remind you, we will be asking you a lot of questions about yourself and your child. Please answer each question as best as you can and feel free to skip any questions you are uncertain of or are uncomfortable answering. You may stop the survey at any time.

What is your current relationship to a child with Down syndrome?

- Biological Mother
- Biological Father
- Adoptive Mother
- Adoptive Father
- Grandfather
- Grandmother
- Other, please specify

How long have you known your child with Down syndrome?

- Since birth
- Other, please specify years/months

When did you learn that your child has Down syndrome?

- Before child's birth/adoption
- At child's birth/adoption
- Other: _____

Was genetic testing completed to determine Down syndrome diagnosis?

- Yes
- No

If yes:

What is the genetic cause of your child's Down syndrome?

- Trisomy 21
- Mosaic Down syndrome
- Translocation
- Other: _____

Contingent Question 1: Does your child currently live with you?

- Yes
- No

If yes: (to CQ1)

In what type of setting is your current residence?

- Rural
- Suburban
- Urban

Is more than one language spoken in your home?

- Yes
- No

How Many Languages are spoken in the home?

- 2
- 3
- More than 3**

Primary Language: Please specify: _____

What percentage of time is this language spoken in your home?

- 0-25% of the time
- 25-50% of the time
- 50-75% of the time
- 75-100% of the time

Language 2: Please specify: _____

What percentage of time is this language spoken in your home?

- 0-25% of the time
- 25-50% of the time
- 50-75% of the time
- 75-100% of the time

Language 3: Please specify: _____

What percentage of time is this language spoken in your home?

- 0-25% of the time
- 25-50% of the time
- 50-75% of the time
- 75-100% of the time

Who currently lives in your child's home? (Specify number of each)

- Mother #__
- Father #__
- Stepmother #__
- Stepfather #__
- Grandfather #__
- Grandmother #__
- Sibling#__

What is your approximate household income?

- \$0-\$25,000/year
- \$25,000-\$50,000/year
- \$50,000-\$100,000/year
- \$100,000-\$150,000/year
- Over \$150,000/year

If no (to CQ1):**In what type of setting is your child's current residence?**

- Rural
- Suburban
- Urban

In what type of residence does your child live?

- Independent home
- Group home
- With another family member: please specify: _____
- Other: _____

Did your child grow up in your household?

- Yes
- No

If yes, please answer the following questions for the time you child was with you:

What type of setting was your residence in?

- Rural
- Suburban
- Urban

Is more than one language spoken in your home?

- Yes
- No

How Many Languages are spoken in the home?

- 2
- 3

More than 3

Primary Language: Please specify: _____

What percentage of time is this language spoken in your home?

- 0-25% of the time
- 25-50% of the time
- 50-75% of the time
- 75-100% of the time

Language 2: Please specify: _____

What percentage of time is this language spoken in your home?

- 0-25% of the time
- 25-50% of the time
- 50-75% of the time
- 75-100% of the time

Language 3: Please specify: _____

What percentage of time is this language spoken in your home?

- 0-25% of the time
- 25-50% of the time
- 50-75% of the time
- 75-100% of the time

Who currently lives in your child's home? (specify number of each)

Caretaker#__

Peer with Developmental Disability#__

Peer with Typical Development #__

Sibling #__

Other Family Member #__

What is your approximate household income?

\$0-\$25,000/year

\$25,000-\$50,000/year

\$50,000-\$100,000/year

\$100,000-\$150,000/year

Over \$150,000/year

Please answer the following questions about yourself.

What is your Age:

What is your Primary Race/Ethnicity: African American

Hispanic/Latino(a)

White/Caucasian Asian/Pacific Islander Other

What is your Secondary Race/Ethnicity: Not applicable African American

Hispanic/Latino(a) White/Caucasian

Asian/Pacific Islander Other

In which region of the United States do you reside?

Midwest

Northeast

West

Southwest

Southeast

What your Primary Language:

Please Specify: _____

What is your Secondary Language:

None

Please Specify: _____

What is your Education background?**High School/GED:** Completed --- Y N; number of years _____**Technical or Associate's Degree:** Completed --- Y N; number of years _____**B.A./B.S.:** Completed --- Y N; number of years _____**Graduate Degree:** Completed --- Y N; number of years _____**Doctoral Degree:** Completed --- Y N; number of years _____**What is your Current Employment status:**

Not employed: # years

Employed temporarily/seasonally

Employed part-time (30 hours per week or less)

Employed full-time (30 hours per week or more)

Retired: # years

Occupation: _____**If your child comes from a 2 parent/guardian household please answer the following questions about the other parent/guardian of your child:****Does your child come from a 2 parent/guardian household?** Yes No

What is parent/guardian #2's Relationship to Child:

Biological Mother
 Biological Father
 Adoptive Mother
 Adoptive Father
 Stepmother
 Stepfather
 Grandparent
 Other

What is parent/guardian #2's Age:**What is parent/guardian #2's Primary Race/Ethnicity:**

African American	Hispanic/Latino(a)
White/Caucasian	Asian/Pacific Islander
Other	

What is parent/guardian #2's Secondary Race/Ethnicity:

Not applicable	
African American	Hispanic/Latino(a)
White/Caucasian	Asian/Pacific Islander
Other	

What is parent/guardian #2's Primary Language spoken:

Please Specify: _____

What is parent/guardian #2's Secondary Language spoken:

None
 Please Specify: _____

What is parent/guardian #2's Education background?

High School/GED: Completed --- Y N; number of years _____

Technical or Associate's Degree: Completed --- Y N; number of years _____

B.A./B.S.: Completed --- Y N; number of years _____

Graduate Degree: Completed --- Y N; number of years _____

Doctoral Degree: Completed --- Y N; number of years _____

What is parent/guardian #2's Current Employment:

Not employed # years:
 Employed temporarily/seasonally
 Employed part-time (30 hours per week or less)
 Employed full-time (30 hours per week or more)
 Retired: # years

Occupation: _____

Please answer the following questions about your child's siblings:

Does your child have any siblings?

Yes: #

No:

Sibling 1:

Gender: Female Male

Age: _____

Does this child have a disability?

Yes, please specify: _____

No

Sibling 2:

Gender: Female Male

Age: _____

Does this child have a disability?

Yes, please specify: _____

No

Sibling 3:

Gender: Female Male

Age: _____

Does this child have a disability?

Yes, please specify: _____

No

Sibling 4:

Gender: Female Male

Age: _____

Does this child have a disability?

Yes, please specify: _____

No

Sibling 5:

Gender: Female Male

Age: _____

Does this child have a disability?

Yes, please specify: _____

No

Please answer the following questions about the child for whom this survey is relevant:

What is your Child's Gender: Female Male

What is your Child's Birthdate: Month/Date/Year

What is your Child's Primary Race/Ethnicity:

African American Hispanic/Latino(a)
White/Caucasian Asian/Pacific Islander
Other

What is your Child's Secondary Race/Ethnicity:

African American Hispanic/Latino(a)
White/Caucasian Asian/Pacific Islander
Other

What is your Child's Current Language Stage:

- Not using words and/or signs
(allow to answer prelinguistic stage questions)
- Using single words and/or signs
(allow to answer early words/signs questions)
- Combining words and/or signs (2-3 word utterances)
Ex: "want cookie", "play blocks", "me up"
(allow to answer 2-3 word utterances questions)
- Uses complete/almost complete sentences
Ex: "I want juice", "Plane is flying", "I goes home"
(allow to answer 3-4 word utterances questions)
- Uses conversational language
Ex: Able to engage in conversation, tell stories, etc.
(allow to answer conversational language questions)

Does your child speak English?

Yes No

What percentage of time does your child speak this language?

0-25%
25-50%
50-75%
75-100%

Does your child speak any language/s other than English? Yes No

Language 1: _____

What percentage of time is this language spoken in your home: 0-25%
25-50%
50-75%
75-100%

Language 2: _____

What percentage of time is this language spoken in your home 0-25%
25-50%
50-75%
75-100%

Does your child use sign language:

- _____ No
_____ Yes, along with spoken English/other language
He/she uses sign _____% of the time
_____ Yes, alone
He/she uses sign _____% of the time

Does your child have a hearing loss?

- No
Yes
Hasn't been tested

If yes, please indicate severity:

<i>Right Ear</i>	<i>Left Ear</i>
Mild - 25-40dB	Mild - 25-40dB
Moderate – 40-65dB	Moderate – 40-65dB
Severe- 65-90dB	Severe- 65-90dB
Profound – over 90dB	Profound – over 90dB
Uncertain	Uncertain

Does your child have any other diagnoses or medical conditions? Yes No

If yes,
What is the diagnosis? _____

What was the age of your child when this diagnosis was made? _____

Is your child currently taking medication associated with this diagnosis? Yes
No

To what degree does this condition interfere with daily living?

0	1	2	3	4	5
Does not Interfere		Mildly interferes	Moderately interferes		Significantly Interferes

PRELINGUISTIC STAGE:

Please answer questions as accurately as possible for your child who *is not yet using words and/or signs*.

What is your child's primary mode of communication?

Oral/Spoken Language
 Signs/gestures
 AAC Device
 Picture Exchange Communication System (PECS)
 Other: _____

How do you primarily communicate with your child?

Oral/Spoken Language
 Signs/gestures
 Pictures
 Writing
 Other: _____

Please answer the following questions about your child's language skills.

My child began using looks, vocalizations, and sounds to communicate when he/she was approximately..._____ years old.

My child looks at me when attempting to communicate:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child vocalizes when attempting to communicate:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child uses gestures (pointing, giving, head nodding) to communicate:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

Approximate number of oral/spoken words my child comprehends:

0-25 words
25-50 words
50-100 words
100+ words

Approximate number of signs/gestures my child comprehends:

0-25 words
25-50 words
50-100 words
100+ words

Please answer the following questions about your child's literacy skills.

My child holds a book in the correct way:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child turns the pages when reading:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child correctly locates words on a page:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child can engage in word play such as rhyming (cat, bat, sat), alliteration (Peter Piper picked..., fight feel fin), sound/word manipulation (low-slow-blow, snowman-snowflake-snowball):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child understands what he or she reads:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child reads simple stories:

0	1	2	3	4	5	6
With no assistance		With some assistance			With maximal assistance	I don't know

My child uses books to learn (reads and understands school books, reads non-fiction stories):

0	1	2	3	4	5	6
With no assistance		With some assistance			With maximal assistance	I don't know

How many written words does your child read/recognize?

- 0-10 words
- 10-25 words
- 25-50 words
- 50-100 words
- 100+ words

During a typical weekday, what percentage of time is your child in each of the following places? The sum of the percentages should equal 100%.

At home	% of the time	_____
With relative/other caregiver	% of the time	_____
Daycare	% of the time	_____
School	% of the time	_____
Extracurricular Activity	% of the time	_____
Work	% of the time	_____
Other	% of the time	_____

Please answer the following questions regarding your child's special services.

Does your child currently have an Individualized Service plan (IEP/IFSP): Yes

No

If yes, what type?

IFSP (Individualized Family Services Plan)

IEP (Individualized Education Plan)

Other

Does your child currently receive any of the following services?

Occupational Therapy: Yes No

If yes, at what age did your child begin receiving these services?

_____ years

What is the frequency of services? _____ hrs/week

Physical Therapy: Yes No

If yes, at what age did your child begin receiving these services?

_____ years

What is the frequency of services? _____ hrs/week

Behavioral Therapy: Yes No

If yes, at what age did your child begin receiving these services?

_____ years

What is the frequency of services? _____ hrs/week

Speech/Language Therapy: Yes No

If yes, at what age did your child begin receiving these services?

_____ years

What is the frequency of services? _____ hrs/week

Other: _____ Yes No

If yes, at what age did your child begin receiving these services?

_____ years

What is the frequency of services? _____ hrs/week

If yes to S/L services...

Where do your child’s speech and language services take place? *Please indicate the percent of time your child receives speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments are provided for your child? *Please indicate the percent of time your child receives speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What is the level of parent/caregiver involvement in your child’s speech and language services? Please mark all that apply.

Not involved

Observes sessions

Participates in minimal/select sessions

Participates in most/every session

Caregiver received individual training targeting parent involvement

Caregiver implemented interventions outside of therapy sessions

What are the primary goals of therapy?

Do these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Are there any other goals that you want addressed during speech and language therapy?

Yes, please explain:

No

Are there any other interventions that you would like to be used with your child that he/she has not received?

Yes, please explain:

No

How beneficial do you feel your child's speech and language services are?

My child's therapy is not beneficial to his/her communication abilities

My child has made gains in communication limited to therapy sessions

My child has made gains in communication due to therapy but has since regressed

My child has made gains that helped with communication outside of therapy

Other comments about S/L services...

EARLY WORDS and SIGNS

Please answer questions as accurately as possible if your child *is using single words and/or signs*.

What is your child's primary mode of communication?

Oral/Spoken Language

Signs/gestures

AAC Device

Picture Exchange Communication System (PECS)

Other: _____

How do you primarily communicate with your child?

Oral/Spoken Language

Signs/gestures

Pictures

Writing

Other: _____

Please answer the following questions regarding your child's language abilities:

My child...

Spoke his/her 1st Word at the approximate age of: _____ years.
Has not yet begun to talk

First used manual signs at the approximate age of: _____ years.
Has not yet begun to talk

Approximate number of *oral/spoken* words my child *comprehends*: 0-25 words
25-50 words
50-100 words
100+ words

Approximate number of *oral/spoken* words my child *produces*: 0-25 words
25-50 words
50-100 words
100+ words

Approximate number of *signs/gestures* my child *comprehends*: 0-25 words
25-50 words
50-100 words
100+ words

Approximate number of *signs/gestures* words my child produces:

0-25 words
25-50 words
50-100 words
100+ words

Please answer the following questions about your child's literacy skills.

My child holds a book in the correct way:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child turns the pages when reading:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child correctly locates words on a page:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child can engage in word play such as rhyming (cat, bat, sat), alliteration (Peter Piper picked..., fight feel fin), sound/word manipulation (low-slow-blow, snowman-snowflake-snowball):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child understands what he or she reads:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child reads simple stories:

0	1	2	3	4	5	6
With no assistance		With some assistance			With maximal assistance	I don't know

My child uses books to learn (reads and understands school books, reads non-fiction stories):

0	1	2	3	4	5	6
With no assistance		With some assistance			With maximal assistance	I don't know

How many written words does your child read/recognize?

- 0-10 words
- 10-25 words
- 25-50 words
- 50-100 words
- 100+ words

During a typical weekday, what percentage of time is your child in each of the following places? The sum of the percentages should equal 100%.

- | | | |
|-------------------------------|---------------|-------|
| At home | % of the time | _____ |
| With relative/other caregiver | % of the time | _____ |
| Daycare | % of the time | _____ |
| School | % of the time | _____ |
| Extracurricular Activity | % of the time | _____ |
| Work | % of the time | _____ |
| Other | % of the time | _____ |

Please answer the following questions regarding your child's special services.**Does your child currently have an Individualized Service plan (IEP/IFSP):**

Yes No

If yes, what type?

- IFSP (Individualized Family Services Plan)
- IEP (Individualized Education Plan)
- Other

Does your child currently receive any of the following services?**Occupational Therapy:** Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

Physical Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

Behavioral Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

Speech/Language Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

Other: _____ Yes No

If yes, at what age did your child begin receiving these services?

_____ years

What is the frequency of services? _____ hrs/week

If yes to S/L services...

Where do your child's speech and language services take place? *Please indicate the percent of time your child receives speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments are provided for your child? *Please indicate the percent of time your child receives speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What is the level of parent/caregiver involvement in your child's speech and language services? Please mark all that apply.

Not involved

Observes sessions

Participates in minimal/select sessions

Participates in most/every session

Caregiver received individual training targeting parent involvement

Caregiver implemented interventions outside of therapy sessions

What are the primary goals of therapy?

Do these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Are there any other goals that you want addressed during speech and language therapy?

Yes, please explain:

No

Are there any other interventions that you would like to be used with your child that he/she has not received?

Yes, please explain:

No

How beneficial do you feel your child's speech and language services are?

My child's therapy is not beneficial to his/her communication abilities

My child has made gains in communication limited to therapy sessions

My child has made gains in communication due to therapy but has since regressed

My child has made gains that helped with communication outside of therapy

Other comments about S/L services...

Please answer the following questions as accurately as possible about when your child *was not using words or signs to communicate*. It may be helpful for you to think of a particular event (holiday, birthday, vacation) to help you recall your child's language during this time. Name an event or time you will use. _____

What was your child's approximate age at this time? _____ years

Before your child was using words and/or signs to communicate,

What was your child's primary mode of communication?

Oral/Spoken Language

Signs/gestures

AAC Device

Picture Exchange Communication System (PECS)

Other: _____

How did you primarily communicate with your child?

Oral/Spoken Language

Signs/gestures

Pictures

Writing

Other: _____

During a typical weekday, what percentage of time was your child in each of the following places? *The sum of the percentages should equal 100%.*

At home % of the time _____

With relative/other caregiver % of the time _____

Daycare % of the time _____

School % of the time _____

Extracurricular Activity % of the time _____

Work % of the time _____

Other % of the time _____

Did your child have an Individualized Service plan (IEP/IFSP): Yes No

If yes, what type?

IFSP (Individualized Family Services Plan)

IEP (Individualized Education Plan)

Other

Did your child receive any of the following services?**Occupational Therapy:** Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Physical Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Behavioral Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Speech/Language: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Other: _____ Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

If yes to S/L services...**Where did your child's speech and language services take place?** *Please indicate the approximate percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments were provided for your child? *Please indicate the percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What was the level of parent/caregiver involvement in your child's speech and language services? Please mark all that apply.

Not involved

Observed sessions

Participated in minimal/select sessions

Participated in most/every session

Caregiver received individual training targeting parent involvement

Caregiver implemented interventions outside of therapy sessions

What were the primary goals of therapy?

Did these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Were there any other goals that you wanted addressed during speech and language therapy?

Yes, please explain:

No

Were there any other interventions that you would have liked to be used with your child that he/she did not receive?

Yes, please explain:

No

How beneficial did you feel your child's speech and language services were?

My child's therapy was not beneficial to his/her communication abilities

My child made gains in communication limited to therapy sessions

My child made gains in communication due to therapy but regressed

My child made gains that helped with communication outside of therapy

Other comments about S/L services...

2-3 WORD UTTERANCES QUESTIONS:

Please answer questions as accurately as possible if your child *is combining words and/or signs*. For example using sentences such as “more cookies”, “play ball”, “me go too”

What is your child’s primary mode of communication?

Oral/Spoken Language

Signs/gestures

AAC Device

Picture Exchange Communication System (PECS)

Other: _____

How do you primarily communicate with your child?

Oral/Spoken Language

Signs/gestures

Pictures

Writing

Other: _____

Please answer the following questions regarding your child’s language abilities:

My child began using utterances with two words when he/she was approximately..._____ years old.

My child uses utterances with two words:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don’t know

My child uses utterances with verbs (run, eat, want):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don’t know

My child asks questions (Me go? Why not?):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don’t know

Please answer the following questions about your child’s literacy skills.

My child holds a book in the correct way:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don’t know

My child turns the pages when reading:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don’t know

My child correctly locates words on a page:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child can engage in word play such as rhyming (cat, bat, sat), alliteration (Peter Piper picked..., fight feel fin), sound/word manipulation (low-slow-blow, snowman-snowflake-snowball):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child understands what he or she reads:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child reads simple stories:

0	1	2	3	4	5	6
With no assistance		With some assistance			With maximal assistance	I don't know

My child uses books to learn (reads and understands school books, reads non-fiction stories):

0	1	2	3	4	5	6
With no assistance		With some assistance			With maximal assistance	I don't know

How many written words does your child read/recognize?

0-10 words
 10-25 words
 25-50 words
 50-100 words
 100+ words

During a typical weekday, what percentage of time is your child in each of the following places? The sum of the percentages should equal 100%.

At home	% of the time	_____
With relative/other caregiver	% of the time	_____
Daycare	% of the time	_____
School	% of the time	_____
Extracurricular Activity	% of the time	_____
Work	% of the time	_____
Other	% of the time	_____

Please answer the following questions regarding your child's special services.

Does your child currently have an Individualized Service plan (IEP/IFSP): Yes

No

If yes, what type?

IFSP (Individualized Family Services Plan)

IEP (Individualized Education Plan)

Other

Does your child currently receive any of the following services?

Occupational Therapy: Yes No

If yes, at what age did your child begin receiving these services?

_____ years

What is the frequency of services? _____ hrs/week

Physical Therapy: Yes No

If yes, at what age did your child begin receiving these services?

_____ years

What is the frequency of services? _____ hrs/week

Behavioral Therapy: Yes No

If yes, at what age did your child begin receiving these services?

_____ years

What is the frequency of services? _____ hrs/week

Speech/Language Therapy: Yes No

If yes, at what age did your child begin receiving these services?

_____ years

What is the frequency of services? _____ hrs/week

Other: _____ Yes No

If yes, at what age did your child begin receiving these services?

_____ years

What is the frequency of services? _____ hrs/week

If yes to S/L services...

Where do your child's speech and language services take place? *Please indicate the percent of time your child receives speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments are provided for your child? *Please indicate the percent of time your child receives speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____
 Individual with parent/caregiver % of time: _____
 Group without parent/caregiver % of time: _____
 Group with parent/caregiver % of time: _____

What is the level of parent/caregiver involvement in your child's speech and language services? Please mark all that apply.

Not involved
 Observes sessions
 Participates in minimal/select sessions
 Participates in most/every session
 Caregiver received individual training targeting parent involvement
 Caregiver implemented interventions outside of therapy sessions

What are the primary goals of therapy?

Do these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Are there any other goals that you want addressed during speech and language therapy?

Yes, please explain:

No

Are there any other interventions that you would like to be used with your child that he/she has not received?

Yes, please explain:

No

How beneficial do you feel your child's speech and language services are?

My child's therapy is not beneficial to his/her communication abilities

My child has made gains in communication limited to therapy sessions

My child has made gains in communication due to therapy but has since regressed

My child has made gains that helped with communication outside of therapy

Other comments about S/L services...

Please answer questions as accurately as possible about when your child *was using single words and/or signs* to communicate. It may be helpful for you to think of a particular event (holiday, birthday, vacation) to help you recall your child's language during this time. Name an event or time you will use. _____

My child began using single words to communicate when he/she was approximately _____ years old.

When your child was using single words,

What was your child's primary mode of communication?

Oral/Spoken Language

Signs/gestures

AAC Device

Picture Exchange Communication System (PECS)

Other: _____

How did you primarily communicate with your child?

Oral/Spoken Language

Signs/gestures

Pictures

Writing

Other: _____

During a typical weekday, what percentage of time was your child in each of the following places? *The sum of the percentages should equal 100%.*

At home % of the time _____

With relative/other caregiver % of the time _____

Daycare % of the time _____

School % of the time _____

Extracurricular Activity % of the time _____

Work % of the time _____

Other % of the time _____

Did your child have an Individualized Service plan (IEP/IFSP): Yes No

If yes, what type?

IFSP (Individualized Family Services Plan)

IEP (Individualized Education Plan)

Other

Did your child receive any of the following services?

Occupational Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Physical Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Behavioral Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Speech/Language: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Other: _____ Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

If yes to S/L services...

Where did your child's speech and language services take place? *Please indicate the approximate percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments were provided for your child? *Please indicate the percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

- Individual without parent/caregiver % of time: _____
- Individual with parent/caregiver % of time: _____
- Group without parent/caregiver % of time: _____
- Group with parent/caregiver % of time: _____

What was the level of parent/caregiver involvement in your child’s speech and language services? Please mark all that apply.

- Not involved
- Observed sessions
- Participated in minimal/select sessions
- Participated in most/every session
- Caregiver received individual training targeting parent involvement
- Caregiver implemented interventions outside of therapy sessions

What were the primary goals of therapy?

Did these goals seem appropriate for your child?

- Yes
- No,

Which goals and why?

Were there any other goals that you wanted addressed during speech and language therapy?

Yes, please explain:

No

Were there any other interventions that you would have liked to be used with your child that he/she did not receive?

Yes, please explain:

No

How beneficial did you feel your child's speech and language services were?

My child's therapy was not beneficial to his/her communication abilities

My child made gains in communication limited to therapy sessions

My child made gains in communication due to therapy but regressed

My child made gains that helped with communication outside of therapy

Other comments about S/L services...

Please answer the following questions as accurately as possible about when your child *was not words or signs to communicate*. It may be helpful for you to think of a particular event (holiday, birthday, vacation) to help you recall your child's language during this time. Name an event or time you will use. _____

What was your child's approximate age at this time? _____ years

Before your child was using words and/or signs to communicate,

What was your child's primary mode of communication?

Oral/Spoken Language

Signs/gestures

AAC Device

Picture Exchange Communication System (PECS)

Other: _____

How did you primarily communicate with your child?

Oral/Spoken Language

Signs/gestures

Pictures

Writing

Other: _____

During a typical weekday, what percentage of time was your child in each of the following places? *The sum of the percentages should equal 100%.*

At home % of the time _____

With relative/other caregiver % of the time _____

Daycare % of the time _____

School % of the time _____

Extracurricular Activity % of the time _____

Work % of the time _____

Other % of the time _____

Did your child have an Individualized Service plan (IEP/IFSP): Yes No

If yes, what type?

IFSP (Individualized Family Services Plan)

IEP (Individualized Education Plan)

Other

Did your child receive any of the following services?**Occupational Therapy:** Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Physical Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Behavioral Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Speech/Language: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Other: _____ Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

If yes to S/L services...**Where did your child's speech and language services take place?** *Please indicate the approximate percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments were provided for your child? *Please indicate the percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What was the level of parent/caregiver involvement in your child's speech and language services? Please mark all that apply.

Not involved

Observed sessions

Participated in minimal/select sessions

Participated in most/every session

Caregiver received individual training targeting parent involvement

Caregiver implemented interventions outside of therapy sessions

What were the primary goals of therapy?

Did these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Were there any other goals that you wanted addressed during speech and language therapy?

Yes, please explain:

No

Were there any other interventions that you would have liked to be used with your child that he/she did not receive?

Yes, please explain:

No

How beneficial did you feel your child's speech and language services were?

My child's therapy was not beneficial to his/her communication abilities

My child made gains in communication limited to therapy sessions

My child made gains in communication due to therapy but regressed

My child made gains that helped with communication outside of therapy

Other comments about S/L services...

3-4 WORD UTTERANCES:

Please answer questions as accurately as possible if your child *is using complete/almost complete sentences* such as “I want pizza” and “Dog is barking”.

What is your child’s primary mode of communication?

Oral/Spoken Language
 Signs/gestures
 AAC Device
 Picture Exchange Communication System (PECS)
 Other: _____

How do you primarily communicate with your child?

Oral/Spoken Language
 Signs/gestures
 Pictures
 Writing
 Other: _____

Please answer the following questions regarding your child’s language abilities:

My child began using complete/almost complete sentences when he/she was approximately..._____ years old.

How frequently does your child use 3-4 word utterances?

0	1	2	3	4	5	6
Never		Sometimes			Always	I don’t know

How frequently does your child use sentences with a verb (I want a drink. I can do it.) ?

0	1	2	3	4	5	6
Never		Sometimes			Always	I don’t know

How frequently does your child use present and past tenses correctly (The girl dances. The girl danced.):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don’t know

How frequently does your child use adjectives correctly (Mary had three pink books. His fast car was blue.):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don’t know

How frequently does your child use questions correctly (Can I go?, Where are you?):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

How frequently does your child use negations correctly (I can't do it. No more juice):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

Please answer the following questions about your child's literacy skills.

My child holds a book in the correct way:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child turns the pages when reading:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child correctly locates words on a page:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child can engage in word play such as rhyming (cat, bat, sat), alliteration (Peter Piper picked..., fight feel fin), sound/word manipulation (low-slow-blow, snowman-snowflake-snowball):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child understands what he or she reads:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child reads simple stories:

0	1	2	3	4	5	6
With no assistance		With some assistance			With maximal assistance	I don't know

My child uses books to learn (reads and understands school books, reads non-fiction stories):

0	1	2	3	4	5	6
With no assistance		With some assistance			With maximal assistance	I don't know

How many written words does your child read/recognize?

- 0-10 words
- 10-25 words
- 25-50 words
- 50-100 words
- 100+ words

During a typical weekday, what percentage of time is your child in each of the following places? The sum of the percentages should equal 100%.

- At home % of the time _____
- With relative/other caregiver % of the time _____
- Daycare % of the time _____
- School % of the time _____
- Extracurricular Activity % of the time _____
- Work % of the time _____
- Other % of the time _____

Please answer the following questions regarding your child's special services.

Does your child currently have an Individualized Service plan (IEP/IFSP): Yes

No

If yes, what type?

- IFSP (Individualized Family Services Plan)
- IEP (Individualized Education Plan)
- Other

Does your child currently receive any of the following services?

Occupational Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

Physical Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

Behavioral Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

Speech/Language Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

Other: _____ Yes No

If yes, at what age did your child begin receiving these services?

_____ years

What is the frequency of services? _____ hrs/week

If yes to S/L services...

Where do your child’s speech and language services take place? *Please indicate the percent of time your child receives speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments are provided for your child? *Please indicate the percent of time your child receives speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What is the level of parent/caregiver involvement in your child’s speech and language services? Please mark all that apply.

Not involved

Observes sessions

Participates in minimal/select sessions

Participates in most/every session

Caregiver received individual training targeting parent involvement

Caregiver implemented interventions outside of therapy sessions

What are the primary goals of therapy?

Do these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Are there any other goals that you want addressed during speech and language therapy?

Yes, please explain:

No

Are there any other interventions that you would like to be used with your child that he/she has not received?

Yes, please explain:

No

How beneficial do you feel your child's speech and language services are?

My child's therapy is not beneficial to his/her communication abilities

My child has made gains in communication limited to therapy sessions

My child has made gains in communication due to therapy but has since regressed

My child has made gains that helped with communication outside of therapy

Other comments about S/L services...

Please answer the following questions as accurately as possible about when your child *was combining words and/or signs* such as “want cookie” and “Dog bark.” It may be helpful for you to think of a particular event (holiday, birthday, vacation) to help you recall your child’s language during this time. Name an event or time you will use. _____

My child began combining words in utterances when he/she was approximately... ____ years old.

When your child was using utterances with 2-3 words,

What was your child’s primary mode of communication?

Oral/Spoken Language

Signs/gestures

AAC Device

Picture Exchange Communication System (PECS)

Other: _____

How did you primarily communicate with your child?

Oral/Spoken Language

Signs/gestures

Pictures

Writing

Other: _____

During a typical weekday, what percentage of time was your child in each of the following places? *The sum of the percentages should equal 100%.*

At home % of the time _____

With relative/other caregiver % of the time _____

Daycare % of the time _____

Preschool % of the time _____

Extracurricular Activity % of the time _____

Work % of the time _____

Did your child have an Individualized Service plan (IEP/IFSP): Yes No

If yes, what type?

IFSP (Individualized Family Services Plan)

IEP (Individualized Education Plan)

Other

Did your child receive any of the following services?**Occupational Therapy:** Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Physical Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Behavioral Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Speech/Language: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Other: _____ Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

If yes to S/L services...**Where did your child's speech and language services take place?** *Please indicate the approximate percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments were provided for your child? *Please indicate the percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What was the level of parent/caregiver involvement in your child's speech and language services? Please mark all that apply.

- Not involved
- Observed sessions
- Participated in minimal/select sessions
- Participated in most/every session
- Caregiver received individual training targeting parent involvement
- Caregiver implemented interventions outside of therapy sessions

What were the primary goals of therapy?

Did these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Were there any other goals that you wanted addressed during speech and language therapy?

Yes, please explain:

No

Were there any other interventions that you would have liked to be used with your child that he/she did not receive?

Yes, please explain:

No

How beneficial did you feel your child's speech and language services were?

My child's therapy was not beneficial to his/her communication abilities

My child made gains in communication limited to therapy sessions

My child made gains in communication due to therapy but regressed

My child made gains that helped with communication outside of therapy

Other comments about S/L services...

Please answer questions as accurately as possible about when your child *was using single words and/or signs* to communicate. It may be helpful for you to think of a particular event (holiday, birthday, vacation) to help you recall your child's language during this time. Name an event or time you will use. _____

My child began using single words to communicate when he/she was approximately _____ years old.

When your child was using single words,

What was your child's primary mode of communication?

- Oral/Spoken Language
- Signs/gestures
- AAC Device
- Picture Exchange Communication System (PECS)
- Other: _____

How did you primarily communicate with your child?

- Oral/Spoken Language
- Signs/gestures
- Pictures
- Writing
- Other: _____

During a typical weekday, what percentage of time was your child in each of the following places? *The sum of the percentages should equal 100%.*

- | | | |
|-------------------------------|---------------|-------|
| At home | % of the time | _____ |
| With relative/other caregiver | % of the time | _____ |
| Daycare | % of the time | _____ |
| School | % of the time | _____ |
| Extracurricular Activity | % of the time | _____ |
| Work | % of the time | _____ |
| Other | % of the time | _____ |

Did your child have an Individualized Service plan (IEP/IFSP): Yes No

If yes, what type?

- IFSP (Individualized Family Services Plan)
- IEP (Individualized Education Plan)
- Other

Did your child receive any of the following services?**Occupational Therapy:** Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Physical Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Behavioral Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Speech/Language: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Other: _____ Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

If yes to S/L services...**Where did your child's speech and language services take place?** *Please indicate the approximate percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments were provided for your child? *Please indicate the percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What was the level of parent/caregiver involvement in your child's speech and language services? Please mark all that apply.

- Not involved
- Observed sessions
- Participated in minimal/select sessions
- Participated in most/every session
- Caregiver received individual training targeting parent involvement
- Caregiver implemented interventions outside of therapy sessions

What were the primary goals of therapy?

Did these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Were there any other goals that you wanted addressed during speech and language therapy?

Yes, please explain:

No

Were there any other interventions that you would have liked to be used with your child that he/she did not receive?

Yes, please explain:

No

How beneficial did you feel your child's speech and language services were?

- My child's therapy was not beneficial to his/her communication abilities
- My child made gains in communication limited to therapy sessions
- My child made gains in communication due to therapy but regressed
- My child made gains that helped with communication outside of therapy

Other comments about S/L services...

Please answer the following questions as accurately as possible about when your child *was not using words or signs to communicate*. It may be helpful for you to think of a particular event (holiday, birthday, vacation) to help you recall your child's language during this time. Name an event or time you will use. _____

What was your child's approximate age at this time? _____ years

Before your child was using words and/or signs to communicate,

What was your child's primary mode of communication?

Oral/Spoken Language

Signs/gestures

AAC Device

Picture Exchange Communication System (PECS)

Other: _____

How did you primarily communicate with your child?

Oral/Spoken Language

Signs/gestures

Pictures

Writing

Other: _____

During a typical weekday, what percentage of time was your child in each of the following places? *The sum of the percentages should equal 100%.*

At home % of the time _____

With relative/other caregiver % of the time _____

Daycare % of the time _____

School % of the time _____

Extracurricular Activity % of the time _____

Work % of the time _____

Other % of the time _____

Did your child have an Individualized Service plan (IEP/IFSP): Yes No

If yes, what type?

IFSP (Individualized Family Services Plan)

IEP (Individualized Education Plan)

Other

Did your child receive any of the following services?

Occupational Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Physical Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Behavioral Therapy: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Speech/Language: Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Other: _____ Yes No

If yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

If yes to S/L services...

Where did your child's speech and language services take place? *Please indicate the approximate percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments were provided for your child? *Please indicate the percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What was the level of parent/caregiver involvement in your child's speech and language services? Please mark all that apply.

Not involved

Observed sessions

Participated in minimal/select sessions

Participated in most/every session

Caregiver received individual training targeting parent involvement

Caregiver implemented interventions outside of therapy sessions

What were the primary goals of therapy?

Did these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Were there any other goals that you wanted addressed during speech and language therapy?

Yes, please explain:

No

Were there any other interventions that you would have liked to be used with your child that he/she did not receive?

Yes, please explain:

No

How beneficial did you feel your child's speech and language services were?

My child's therapy was not beneficial to his/her communication abilities

My child made gains in communication limited to therapy sessions

My child made gains in communication due to therapy but regressed

My child made gains that helped with communication outside of therapy

Other comments about S/L services...

CONVERSATIONAL STAGE:

Please answer each question as accurately as possible if your child *is using complex sentences to tell stories, engage in conversation, etc.* (When I got home from school I made cookies with my neighbor. I would have eaten all of my dinner, but I had a late afternoon snack.)

How do you primarily communicate with your child?

Oral/Spoken Language

Signs/gestures

Pictures

Writing

Other: _____

What is your child's primary mode of communication?

Oral/Spoken Language

Signs/gestures

AAC Device

Picture Exchange Communication System (PECS)

Other: _____

My child began using complex sentences when he/she was approximately... _____ years old.

Please answer the following questions about your child's language skills.

My child uses present and past tenses correctly (The girl *dances*. The girl *danced*.):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child uses adjectives correctly (Mary had *three pink* books. *His fast* car was *blue*.):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child uses questions correctly (Why did you have to go? What is your favorite sport?):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child uses negations correctly (No, I don't eat broccoli. I never saw that movie. Nobody was home.):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child uses complex sentences correctly (When I get home I will eat a snack. She is sad because he didn't play with her.) :

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child uses idioms and metaphors correctly (I run like a rabbit. It's raining cats and dogs.):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child is able to tell a story in the correct sequence:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

Please answer the following questions about your child's literacy skills.

My child holds a book in the correct way:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child turns the pages when reading:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child correctly locates words on a page:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child can engage in word play such as rhyming (cat, bat, sat), alliteration (Peter Piper picked..., fight feel fin), sound/word manipulation (low-slow-blow, snowman-snowflake-snowball):

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child understands what he or she reads:

0	1	2	3	4	5	6
Never		Sometimes			Always	I don't know

My child reads simple stories:

0	1	2	3	4	5	6
With no assistance		With some assistance			With maximal assistance	I don't know

My child uses books to learn (reads and understands school books, reads non-fiction stories):

0	1	2	3	4	5	6
With no assistance		With some assistance			With maximal assistance	I don't know

How many written words does your child read/recognize?

0-10 words
 10-25 words
 25-50 words
 50-100 words
 100+ words

During a typical weekday, what percentage of time is your child in each of the following places? The sum of the percentages should equal 100%.

At home	% of the time	_____
With relative/other caregiver	% of the time	_____
Daycare	% of the time	_____
School	% of the time	_____
Extracurricular Activity	% of the time	_____
Work	% of the time	_____
Other	% of the time	_____

Please answer the following questions regarding your child's special services.

Does your child currently have an Individualized Service plan (IEP/IFSP): Yes

No

If yes, what type?

IFSP (Individualized Family Services Plan)

IEP (Individualized Education Plan)

Other

Does your child currently receive any of the following services?**Occupational Therapy:** Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

Physical Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

Behavioral Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

Speech/Language Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

Other: _____ Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What is the frequency of services? _____ hrs/week

If yes to S/L services...**Where do your child's speech and language services take place?** *Please indicate the percent of time your child receives speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments are provided for your child? *Please indicate the percent of time your child receives speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What is the level of parent/caregiver involvement in your child's speech and language services? Please mark all that apply.

- Not involved
- Observes sessions
- Participates in minimal/select sessions
- Participates in most/every session
- Caregiver received individual training targeting parent involvement
- Caregiver implemented interventions outside of therapy sessions

What are the primary goals of therapy?

Do these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Are there any other goals that you want addressed during speech and language therapy?

Yes, please explain:

No

Are there any other interventions that you would like to be used with your child that he/she has not received?

Yes, please explain:

No

How beneficial do you feel your child's speech and language services are?

My child's therapy is not beneficial to his/her communication abilities

My child has made gains in communication limited to therapy sessions

My child has made gains in communication due to therapy but has since regressed

My child has made gains that helped with communication outside of therapy

Other comments about S/L services...

Please answer the following questions as accurately as possible about when your child *was using simple or almost complete sentences* such as “I want pizza” and “Dog is barking”. It may be helpful for you to think of a particular event (holiday, birthday, vacation) to help you recall your child’s language during this time. Name an event or time you will use. _____

My child began using simple sentences when he/she was approximately...____ years old.

When your child was using simple sentences,

What was your child’s primary mode of communication?

Oral/Spoken Language

Signs/gestures

AAC Device

Picture Exchange Communication System (PECS)

Other: _____

How did you primarily communicate with your child?

Oral/Spoken Language

Signs/gestures

Pictures

Writing

Other: _____

During a typical weekday, what percentage of time was your child in each of the following places? *The sum of the percentages should equal 100%.*

At home % of the time _____

With relative/other caregiver % of the time _____

Daycare % of the time _____

School % of the time _____

Extracurricular Activity % of the time _____

Work % of the time _____

Other % of the time _____

Did your child have an Individualized Service plan (IEP/IFSP): Yes No

If yes, what type?

IFSP (Individualized Family Services Plan)

IEP (Individualized Education Plan)

Other

Did your child receive any of the following services?**Occupational Therapy:** Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Physical Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Behavioral Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Speech/Language: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Other: _____ Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

If yes to S/L services...**Where did your child's speech and language services take place?** *Please indicate the approximate percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments were provided for your child? *Please indicate the percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What was the level of parent/caregiver involvement in your child's speech and language services? Please mark all that apply.

- Not involved
- Observed sessions
- Participated in minimal/select sessions
- Participated in most/every session
- Caregiver received individual training targeting parent involvement
- Caregiver implemented interventions outside of therapy sessions

What were the primary goals of therapy?

Did these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Were there any other goals that you wanted addressed during speech and language therapy?

Yes, please explain:

No

Were there any other interventions that you would have liked to be used with your child that he/she did not receive?

Yes, please explain:

No

How beneficial did you feel your child's speech and language services were?

My child's therapy was not beneficial to his/her communication abilities

My child made gains in communication limited to therapy sessions

My child made gains in communication due to therapy but regressed

My child made gains that helped with communication outside of therapy

Other comments about S/L services...

Please answer the following questions as accurately as possible about when your child *was combining words and/or signs* such as “want cookie” and “Dog bark.” It may be helpful for you to think of a particular event (holiday, birthday, vacation) to help you recall your child’s language during this time. Name an event or time you will use. _____

My child began combining words in utterances when he/she was approximately... ____ years old.

When your child was using utterances with 2-3 words,

What was your child’s primary mode of communication?

Oral/Spoken Language

Signs/gestures

AAC Device

Picture Exchange Communication System (PECS)

Other: _____

How did you primarily communicate with your child?

Oral/Spoken Language

Signs/gestures

Pictures

Writing

Other: _____

During a typical weekday, what percentage of time was your child in each of the following places? *The sum of the percentages should equal 100%.*

At home % of the time _____

With relative/other caregiver % of the time _____

Daycare % of the time _____

Preschool % of the time _____

Extracurricular Activity % of the time _____

Work % of the time _____

Did your child have an Individualized Service plan (IEP/IFSP): Yes No

If yes, what type?

IFSP (Individualized Family Services Plan)

IEP (Individualized Education Plan)

Other

Did your child receive any of the following services?**Occupational Therapy:** Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Physical Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Behavioral Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Speech/Language: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Other: _____ Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

If yes to S/L services...**Where did your child's speech and language services take place?** *Please indicate the approximate percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments were provided for your child? *Please indicate the percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What was the level of parent/caregiver involvement in your child's speech and language services? Please mark all that apply.

- Not involved
- Observed sessions
- Participated in minimal/select sessions
- Participated in most/every session
- Caregiver received individual training targeting parent involvement
- Caregiver implemented interventions outside of therapy sessions

What were the primary goals of therapy?

Did these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Were there any other goals that you wanted addressed during speech and language therapy?

Yes, please explain:

No

Were there any other interventions that you would have liked to be used with your child that he/she did not receive?

Yes, please explain:

No

How beneficial did you feel your child's speech and language services were?

My child's therapy was not beneficial to his/her communication abilities

My child made gains in communication limited to therapy sessions

My child made gains in communication due to therapy but regressed

My child made gains that helped with communication outside of therapy

Other comments about S/L services...

Please answer questions as accurately as possible about when your child *was using single words and/or signs* to communicate. It may be helpful for you to think of a particular event (holiday, birthday, vacation) to help you recall your child's language during this time. Name an event or time you will use. _____

My child began using single words to communicate when he/she was approximately _____ years old.

When your child was using single words,

What was your child's primary mode of communication?

Oral/Spoken Language

Signs/gestures

AAC Device

Picture Exchange Communication System (PECS)

Other: _____

How did you primarily communicate with your child?

Oral/Spoken Language

Signs/gestures

Pictures

Writing

Other: _____

During a typical weekday, what percentage of time was your child in each of the following places? *The sum of the percentages should equal 100%.*

At home % of the time _____

With relative/other caregiver % of the time _____

Daycare % of the time _____

School % of the time _____

Extracurricular Activity % of the time _____

Work % of the time _____

Other % of the time _____

Did your child have an Individualized Service plan (IEP/IFSP): Yes No

If yes, what type?

IFSP (Individualized Family Services Plan)

IEP (Individualized Education Plan)

Other

Did your child receive any of the following services?**Occupational Therapy:** Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Physical Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Behavioral Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Speech/Language: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Other: _____ Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

If yes to S/L services...**Where did your child's speech and language services take place?** *Please indicate the approximate percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments were provided for your child? *Please indicate the percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What was the level of parent/caregiver involvement in your child's speech and language services? Please mark all that apply.

- Not involved
- Observed sessions
- Participated in minimal/select sessions
- Participated in most/every session
- Caregiver received individual training targeting parent involvement
- Caregiver implemented interventions outside of therapy sessions

What were the primary goals of therapy?

Did these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Were there any other goals that you wanted addressed during speech and language therapy?

Yes, please explain:

No

Were there any other interventions that you would have liked to be used with your child that he/she did not receive?

Yes, please explain:

No

How beneficial did you feel your child's speech and language services were?

My child's therapy was not beneficial to his/her communication abilities

My child made gains in communication limited to therapy sessions

My child made gains in communication due to therapy but regressed

My child made gains that helped with communication outside of therapy

Other comments about S/L services...

Please answer the following questions as accurately as possible about when your child *was not* words or signs to communicate. It may be helpful for you to think of a particular event (holiday, birthday, vacation) to help you recall your child's language during this time. Name an event or time you will use. _____

What was your child's age at this time? _____ years

Before your child was using words and/or signs to communicate,

What was your child's primary mode of communication?

Oral/Spoken Language

Signs/gestures

AAC Device

Picture Exchange Communication System (PECS)

Other: _____

How did you primarily communicate with your child?

Oral/Spoken Language

Signs/gestures

Pictures

Writing

Other: _____

During a typical weekday, what percentage of time was your child in each of the following places? *The sum of the percentages should equal 100%.*

At home % of the time _____

With relative/other caregiver % of the time _____

Daycare % of the time _____

School % of the time _____

Extracurricular Activity % of the time _____

Work % of the time _____

Other % of the time _____

Did your child have an Individualized Service plan (IEP/IFSP): Yes No

If yes, what type?

IFSP (Individualized Family Services Plan)

IEP (Individualized Education Plan)

Other

Did your child receive any of the following services?**Occupational Therapy:** Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Physical Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Behavioral Therapy: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Speech/Language: Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

Other: _____ Yes NoIf yes, at what age did your child begin receiving these services?
_____ years

What was the frequency of services? _____ hrs/week

If yes to S/L services...**Where did your child's speech and language services take place?** *Please indicate the approximate percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

At home % of time: _____

In a clinic/hospital % of time: _____

At school/daycare % of time: _____

Other: _____ % of time: _____

What types of treatments were provided for your child? *Please indicate the percent of time your child received speech and language services in each location. The sum of the percentages should equal 100%.*

Individual without parent/caregiver % of time: _____

Individual with parent/caregiver % of time: _____

Group without parent/caregiver % of time: _____

Group with parent/caregiver % of time: _____

What was the level of parent/caregiver involvement in your child's speech and language services? Please mark all that apply.

- Not involved
- Observed sessions
- Participated in minimal/select sessions
- Participated in most/every session
- Caregiver received individual training targeting parent involvement
- Caregiver implemented interventions outside of therapy sessions

What were the primary goals of therapy?

Did these goals seem appropriate for your child?

Yes

No,

Which goals and why?

Were there any other goals that you wanted addressed during speech and language therapy?

Yes, please explain:

No

Were there any other interventions that you would have liked to be used with your child that he/she did not receive?

Yes, please explain:

No

How beneficial did you feel your child's speech and language services were?

My child's therapy was not beneficial to his/her communication abilities

My child made gains in communication limited to therapy sessions

My child made gains in communication due to therapy but regressed

My child made gains that helped with communication outside of therapy

Other comments about S/L services...