

Narrative Skills of Monolingual and Bilingual Pre-School and Primary School Children with Developmental Language Disorder (DLD): A Systematic Review

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Abstract

Developmental Language Disorder (DLD), previously known as Specific Language Impairment (SLI), is a common developmental disorder that affects both preschool and school aged children. The language characteristics of children with DLD vary considerably with the main challenge being the learning of language structures and morphosyntactic and lexical limitations (Leonard, 2014). Research has shown that when it comes to bilinguals with language deficits caution should be taken, since they may arise from impairment due to DLD but can also be caused by insufficient exposure to and limited knowledge of the target language (Reilly, Losh, Bellugi, & Wulfeck, 2004). A method that has often been used to investigate the language features of monolingual and monolingual children with DLD is to examine their narrative abilities, since narratives provide a quasi-naturalistic measure of children's spontaneous language and reflect distinctive structural linguistic changes through childhood and adolescence. The objective of this paper is to conduct a systematic review of recent studies on the narrative skills of monolingual and bilingual pre-school and primary school children with DLD. Therefore, it focuses on 13 research articles published since 2010 until present that met the inclusion criteria set in this review. The selected studies fell under three main areas: 1) studies assessing the narrative skills of monolingual children with DLD/SLI, 2) studies comparing bilingual children of typical development and bilinguals with DLD/SLI and 3) studies comparing monolingual and bilingual children with DLD/SLI. The majority of studies reported significant differences in the narrative performance between monolinguals with and without DLD and between bilinguals with and without DLD. No significant difference is observed in the performance between monolinguals

and bilinguals of typical language development, yet performance differences are noted between monolinguals with DLD and bilinguals with the same language impairment. Microstructure seems to be greatly affected by DLD with macrostructure being affected the less.

Keywords

Narrative Skills, Developmental Language Disorder, Monolinguals, Bilinguals, Pre-School & School Aged Children

1. Introduction

The production and understanding of narrative speech are very important in preschool and early school age. Children's narrative skills seem to be related to overall school and reading success as well as early mathematical ability (Boudreau, 2008; Justice et al., 2010). Given that children with DLD/SLI appear to be increasing in recent years in the classroom, storytelling assessment can generally provide specialists with important information on the language skills of these children. Especially for bilinguals with DLD storytelling tasks are challenging and can be used to differentiate them from their typically developing (TD) peers since lack of knowledge, normative data, and tools may often lead to over or underdiagnosis of language deficits in bilingual population (Laasonen et al., 2018).

2. Literature

2.1. Typical Language Development at Preschool and Early School Age

From infancy, children begin to understand the structure, use, and meaning of language (Ralli & Sidiropoulou, 2012), and gradually use monosyllabic phrases or two-word phrases to communicate (McCabe & Rollins, 1994). By the age of 8 months (pre-speaking stage) babies make inarticulate voices, babbling predominates and by the end of the first year the peculiar phonological ensembles dominate. Then, after the first year, they enter the holophrastic stage (12 - 18 months) during which each word produced by the child corresponds to a whole sentence in the adult language. The telegraphic stage (18 - 20 months) follows, in which children form sentences with 2 - 3 words and then they move onto the stage of complete syntactic and morphological development (3 - 6 years). At this stage sentences become more complex, a correct syntactic order of the words prevails, and generally there is a great progress in the perceptual and as well as in the productive process of the language. This is followed by learning the conceptual content of the language (8 years old), by enriching the vocabulary, acquiring the meaning that corresponds to each word, relating the meanings of the words, and mastering the process of constructing the meanings of the words in the sentence (Kuhl, 2004).

2.2. Specific Language Impairment (SLI)—Developmental Language Disorder (DLD)

Specific Language Impairment (SLI) is a common developmental disorder that includes one of the largest age groups of preschool children (Tomblin et al., 1997). Although it is one of the most prevalent terms in the international literature, one can often find the terms Primary Developmental Language Impairment, Evolutionary Dysphasia (expressive and perceptual type), Language Learning Disorder (Arndt & Schuele, 2012). SLI had been the most commonly used term in studies until 2017, when the 2017 Delphi consensus took place and Developmental Language Disorder (DLD) was established instead, following Bishop, Snowling, Thompson, Greenhalgh, and the CATALISE-2 Consortium (2017). In this review the terms SLI and DLD are used alternatively. Developmental Language Disorder (DLD) refers to children whose significant limitations with language cannot be attributed to factors such as hearing impairment, neurological damage or disease, intellectual disability, or autism spectrum disorder. The term, “Developmental Language Disorder” (DLD) was approved for use when the language disorder was not associated with a known biomedical aetiology (Bishop et al., 2017).

The recent Delphi Consensus Study has additionally pointed out some specific indicators of atypical language development in 4 - 5-year-old children, including inconsistent or abnormal verbal interaction and at most three word utterances (Bishop et al., 2016). Importantly, children diagnosed with DLD as preschoolers later on often have difficulties in their social-emotional development and they also demonstrate lower levels of school performance (Vissers & Koolen, 2016). Approximately 7% of the population is expected to have DLD (Botting, 2010), a disorder with great heterogeneity and a wide range of communication difficulties that, although are manifested in childhood they still occur in adulthood. In particular, DLD is characterized by linguistic deficits of perceptual and expressive type which include extensive use of immature phonological processes (Aguilar-Mediavilla et al., 2002), slow word retrieval and naming errors (McGregor et al., 2002) and shorter mean length of utterance (Redmond, 2004). These problems appear to affect the ability of children with DLD to compose and transmit oral narratives appropriate for their age. It has also been found that poor expressive abilities of children with DLD in early childhood are the best predictor of reading problems and dyslexia in school-aged children (Lyytinen et al., 2015). As a result, children with DLD are placed at a further disadvantage compared to their peers (Tomas & Vissers, 2019).

2.3. Narrative Discourse and DLD

Discourse refers to the use of spoken or written language in a social context. Yet, in linguistics, the term “discourse” is used to mean a unit of language longer than a single sentence (Tannen et al., 2015). Discourse is essential for interaction and for the expression of ideas, feelings and opinions and establishing relation-

ships. However, due to their language impairments, children with developmental language disorder (DLD) often have problems with everyday discourse which impact on their lives more widely. Discourse and narrative are given strong emphasis within early years and school curricula (Dipper & Pritchard, 2017). Much of what we know about the discourse of children and adults with language impairment and the majority of the published clinical tools come from picture descriptions and fictional narrative discourse (Linnik et al., 2016). Discourse produced by children with DLD is impaired in terms of their language content. Children with DLD have difficulties in many areas of language that are important for producing narrative stories appropriate for their age. For these children, narrative skills may develop slowly and do not contain the most advanced elements in the narratives of typically developing children. Research has shown that compared to their peers, children with DLD produce less complex stories (Fey et al., 2004), more confused or deficient (Jones, 2015) and with more errors during the production of stories (Guo, Tomblin, & Samelson, 2008). Moreover, fewer causal connections between events (Hayward, Gillam, & Lien, 2007) and fewer elements of story grammar are observed. The latter term concerns the basic building blocks of a story such as the characters, the setting, and the sequence of events (Justice et al., 2006).

During primary school years children with DLD may continue to show weaknesses in their narrative skills. In a study by Fey et al. (2004) who studied the oral and written skills of creating stories for second- and fourth-grade children with DLD, it was found that in both the above grades children with DLD produced shorter and poorer stories and made more grammatical errors than typically developing children. A long-term study of storytelling skills in preschool children in Sweden has shown that children develop their storytelling skills over time, but not at the level of children of standard development at the age of 10 (Reuterskiöld, Hansson, & Sahlén, 2011).

Furthermore, children with DLD retell and produce narratives that are less complete and immature in relation to size, lexical diversity, phrase complexity, and content (Gillam & Pearson, 2004). In addition, the details that make the story more complete, such as the links, seem to be missing in the DLD children's stories (Leonard, 2014). In addition, Cleave, Girolametto, Chen & Johnson (2010) found reduced productivity, limited literary language, and several syntactic errors in children's storytelling with DLD at the age of four, while lexical-grammatical problems were identified in children of five and eight years old (Thomson, 2005). Another study by Vandewalle, Boets, Boons, Ghesquiere, & Zink (2012) found that children with DLD at the age between 5 - 8 years, although they have good literacy development, they continue to show reduced narrative skills, with particular problems in vocabulary and morphology.

In addition, children with DLD appear to have particular difficulty in morphology, such as in the production of critical objects and the use of pronouns (Leonard, 2014). It has also been shown that they have lexical deficits (Leonard & Deevy, 2004) and difficulties with the semantics of words (Befi-Lopes et al.,

2008). Research shows that speech problems can be caused in DLD due to poor semantic representations (Tribushinina & Dubinkina, 2012).

At the coherence level there are some indications that children with DLD have difficulty producing coherent speech, as evidenced by the poor coherence of their narratives (Gonzalez et al., 2012). In addition, they fail to incorporate effectively syntactic and semantic elements into word processing (Tribushinina et al., 2015). Blom & Boerma (2016) found that Dutch children with DLD aged 5 - 6 years, performed poorly in both comprehension and storytelling.

In Greece, a small number of studies have been conducted on the exploration of children's narrative skills at school and early school age. Research by Theodorou & Grohmann (2010) and Theodorou et al. (2012) found that preschool and early school children with DLD who speak Cypriot-Greek scored significantly lower on storytelling performance, showing less amount of relevant information, a smaller number of subordinate sentences and a smaller Mean Length of Utterance (MLU) than TD children. In a research study conducted by Mpaka, Vlassopoulou, & Drakou (2012) in Greek students, it was found that children with DLD compared to children of the corresponding linguistic but not chronological age, showed significantly lower performance in all three parameters of narrative speech: information adequacy, use of subordinate clauses and an average number of words of the five largest sentences in their narrative.

2.4. Discourse Assessment in Children with DLD

Discourse abilities of children with DLD have been examined in two different ways: 1) by focusing on the information content and information structure of the discourse and 2) by focusing on the language content of the discourse. The first is referred to in the literature as macrostructure analysis and approach whereas the second is referred to as microstructure analysis. The two most widely used models of macrostructure are story grammar and high point analysis. Such approaches focus on recognizing the key components of a story, the sequence of events, and the episodic structure of a story (Justice et al., 2006).

In particular examining the narrative methods of evaluating narrative skills we reach the conclusion that storytelling is a complex task that requires the integration of language, cognitive and social skills (Justice et al., 2010) and is based on many types of knowledge (Colozzo et al., 2011) such as global knowledge, knowledge related to the genre, structural knowledge and linguistic knowledge. There are different methods of evaluating narrative skills. Three commonly used methods are: 1) story production, 2) retelling, and 3) extracting narrative through discussion. In the first method of producing a story (e.g. Frog, where are you?) (Mayer, 1969), children are instructed to compose stories from sequence cards or wordless books. In the method of story retelling (e.g. the Bus Story Test) (Renfrew, 1997), children listen to stories told by the researcher and are asked to tell the stories back to the researcher (Vandewalle et al., 2012). Story-retelling results in larger stories with more grammatical elements and complete episode structures than storytelling (Vandewalle et al., 2012). In the method of extracting

narrative through discussion, children are asked to create three narratives in response to the researcher's conversational prompts (Epstein & Phillips, 2009).

2.5. Bilingual Children with DLD

A number of studies in the narratives of monolingual and bilingual children have found a similar development of macro-structures since universal and language independent strategies are used. Yet, some studies revealed that bilinguals often produced less sophisticated morphosyntactic constructions and used fewer language-specific resources (e.g., aspectual markers, temporal connectors) than monolinguals in order to express various narrative functions. The latter findings often apply to school-age bilingual children who have been probably less exposed to reading and writing practices in the school language (SL) before their school enrollment. All these results show that there are differences between macro- and micro-structure (Hipfner-Boucher et al., 2015) and that micro-structural narrative ability is more sensitive to language-specific experience and input, whereas macrostructural narrative skills seem relatively independent of knowledge of a particular language (Boerma et al., 2016).

Although the body of literature focusing on narrative abilities of TD bilingual children is growing, few studies have studied narratives produced by bilingual children with DLD. During the last decade a number of studies have compared the narrative abilities of bilingual and monolingual children with TLD with those produced by their peers with DLD (Bedore, Pena, Gillam, & Ho, 2010) and they have reported inconsistent results for macrostructure measures (Rezzonico et al., 2015). According to these studies it seems that the macrostructure is relatively preserved in DLD and that bilingualism allows cognitive benefits that could enhance children's ability to take a global view on the story and derive the story's core aspects. This benefit, though, was expected to be relatively limited for bilingual children with DLD as compared to Typical Development bilinguals, given their weaker control over microstructure (Tsipmli et al., 2016).

Iluz-Cohen & Walters (2012) investigated the narrative production abilities of English-Hebrew bilingual preschool children with and without DLD telling familiar stories. Their results showed similar patterns of narrative structuring abilities (macro-structure level), with a disadvantage for DLD bilinguals in language-related (micro-structure) measures. Yet, regarding micro-structural elements, bilingual children with DLD are reported to obtain lower scores than their TD peers. By contrast, in a longitudinal study of Spanish-English bilinguals with and without DLD, Squires et al. (2014) reported that the Typical Language Development (TLD) group outperformed children with DLD in macro- and micro-structure elements in both languages, at both preschool and first grade.

Relatively balanced bilingual children with DLD (e.g. French-English) appear to have very similar language abilities in each language compared to monolingual children with DLD who speak the same languages (Paradis, Crago, Genesee, & Rice, 2003). This finding may constitute a surprise to researchers of DLD since there has been a concern that children already experiencing difficulties learning

one language would likely experience difficulties with the task of learning a second language. Clearly, there is not a capacity limit even for children with a language deficit. The problem seems to be one of language aptitude and not mental storage space.

Various studies using the Multilingual Assessment Instrument for Narratives, (Gagarina et al., 2015) confirmed previous results on similar macro-level abilities in monolingual and bilingual children regardless of their language abilities while micro-structure often distinguished bilingual children with TLD from those with DLD (Boerma, Leseman, Timmermeister, Wijnen, & Blom, 2016). A recent study with Russian-Hebrew bilinguals revealed that a more detailed macro-structural analysis that includes story grammar elements and causal relations was effective in distinguishing bilinguals with TLD and DLD (Fichman, Altman, Voloskovich, Armon-Lotem, & Walters, 2017).

With regards to microstructure elements, bilingual children with SLI are reported to obtain lower scores than their TD peers (Iluz-Cohen & Walters, 2012).

In a study of Gutiérrez-Clellen and Simon-Cerejido (2007) a narrative sample was used to analyse the verb accuracy of monolingual and English-Spanish bilingual children with and without DLD. They observed that monolingual and bilingual TD children had higher verb accuracy than the group of children with DLD. Moreover, Cleave et al. (2010) examined the performance of the children on norm-referenced standardized tests and narrative measures. Although the 14 monolingual children with DLD of the sample outperformed the 12 bilingual children with DLD on two norm-referenced standardized language tests, there were no differences between the two groups in macrostructure or microstructure scores derived from the narratives, such as accuracy of tensed verbs, grammaticality or complexity. Furthermore, a longitudinal study of Squires et al. (2014) revealed that in a story-retelling activity, Spanish-English bilingual TD children outperformed the group of children with DLD on macro- and microstructure in kindergarten and first grade. TD children exhibited larger improvements in both languages (Spanish and English) for macro- and microstructure than their peers with DLD. The children with language impairment did not improve on microstructure measures from kindergarten to first grade and made limited improvement in macrostructure.

The development of grammar in bilingual children with SLI was investigated in Castilla-Earls et al. (2016), who addressed the production of articles and object pronouns in Spanish speaking bilingual children. The study used an elicited production task and separated the children between balanced and Spanish-dominant bilinguals. The results showed lower accuracy scores for children with DLD in comparison to children with typical language development (TLD) for both articles and object pronouns. Yet, in balanced bilingual children the difference between the two groups was similar for both articles and pronouns. However, in Spanish-dominant children there was a larger difference in articles than object pronouns. This study highlights that language dominance should be carefully considered when assessing bilingual children.

3. Method

3.1. Inclusion and Exclusion Criteria

A descriptive study was carried out to establish the current state of art scientific research regarding the narrative skills of monolingual and bilingual pre-school and primary school children with developmental language disorder (DLD). The study focuses on children from 4 to 10 years old.

The studies included in this review were selected based on the following criteria:

- 1) The studies were published in peer-reviewed journals in English from 2010 to 2020.
- 2) The studies should clearly assess the narrative skills of children.
- 3) The children included in the studies should be between 4 to 10 years old with DLD/SLI.
- 4) The studies should refer to monolingual and bilingual children with DLD/SLI only.

Exclusion Criteria

Referring to the exclusion criteria, in the Systematic Review we excluded:

- 1) Conceptual papers, theses, and doctoral dissertations.
- 2) Studies that employed a narrative intervention procedure with preschool or school age children.
- 3) Studies which included participants with social communication impairments that were secondary to other conditions associated with DLD (e.g. ASDs, behavior disorders, developmental disabilities, down syndrome, mental retardation).
- 4) Studies referring to adolescents outside the age range between 4 to 10 years old.

3.2. Search Procedures

A systematic review accessed the following three databases: SCOPUS, ProQuest and EBSCO. Database search was conducted in the period between January and June 2020. The search was limited to original articles that described characteristics of narrative and/or language skill levels in subjects aged between 4 to 10 years with DLD/SLI. In order to retrieve the articles the search focused on terms such as narrative skills, Developmental language disorder, Specific Language Impairment, bilinguals with DLD, monolinguals with DLD, storytelling, storytelling and retelling, as well as a combination and association of these terms. A review of the abstracts was utilized to further determine whether the retrieved studies would be included in this review. Following the QUOROM flow chart (adapted from Moher et al., 1999) the potentially relevant articles identified from literature search were (N = 2864) since they were excluded based on title review. The studies retrieved for more detailed evaluation were (N = 1256) whereas the potentially appropriate studies to be included were (N = 384). Finally, the number of studies retained for inclusion in the review were fifty (N = 50). In particu-

lar, the title of each article was read, and if the title warranted further investigation, the abstract or full text was reviewed. A total of 50 article abstracts and/or full texts was reviewed and screened for inclusion criteria.

4. Results

After the database search, 50 articles were considered for possible inclusion and a total of 13 research studies met the inclusion criteria (6 studies referring to monolinguals, 2 to bilinguals and 5 to monolinguals and bilinguals with DLD) for the assessment of the narrative skills of monolingual and bilingual pre-school and primary school children with Developmental Language Disorder/Specific Language Impairment (DLD/SLI). Each of these studies was then assessed by the main author to determine whether it met the inclusion criteria in terms of the participants (monolinguals or bilinguals with DLD/SLI), the target outcomes, the research design and the selected aspects of analysis (narrative skills, cognitive abilities and narrative abilities or a combination of these). The selected studies fell under three main areas: 1) studies assessing the narrative skills of monolingual children with DLD/SLI, 2) studies comparing bilingual children of typical development and bilinguals with DLD/SLI and 3) studies comparing monolingual and bilingual children with DLD/SLI. Related to the year of publication most of the studies that involved monolinguals were between the years 2010 to 2015 whereas the studies with bilinguals ranged from 2014 to 2020. Regarding the points of analysis, the majority of studies selected topics that focused on our primary research focus, the narrative abilities of children with DLD/SLI whereas a minority examined both the narrative, cognitive and language abilities of children with DLD/SLI.

4.1. Studies Assessing the Narrative Skills of Monolingual Children with DLD/SLI

The thirteen studies under review are summarized below starting with the studies referring to the narrative skills of monolingual pre-school and primary school children with DLD/SLI.

In the study of [Mäkinen et al. \(2014\)](#), the narratives of Finnish children with Specific Language Impairment (SLI) are examined taking into consideration linguistic and pragmatic perspectives, in order to get a comprehensive overview of these children's narrative abilities. The sample consisted of nineteen children with SLI (mean age 6.1 years) and nineteen typically developing age-matched children. Picture-elicited narrations were implemented and analyzed so as to examine linguistic productivity and complexity, grammatical and referential accuracy, event content, the use of mental state expressions and narrative comprehension. Children with SLI showed difficulties in every aspect of narration in comparison to their peers. Only one measure of productivity, namely the number of communication units, did not reach statistical significance. On the one hand children with SLI appeared to have fragile linguistic structure and on the other pragmatic aspects of storytelling (referencing, event content, mental state

expressions and inferencing) were demanding too. These results point out that the pragmatic aspects of narration should be taken into consideration more often when assessing narrative abilities of children with SLI.

In another study (Colozzo et al., 2011), the relationship of content and form in the narratives of school-age children was investigated. The sample consisted of two groups of children with specific language impairment (SLI) and their age-matched peers (British Columbia sample, Mean age = 9.0 [years; months], N = 26; Texas/Kansas sample, Mean age = 7.6, N = 40) completed the Test of Narrative Language (TNL; Gillam & Pearson, 2004). The two samples came from different geographic locations with different selection criteria regarding age and severity. Variables were used coming from the TNL scoring system (Study 1) and from analysis of the story texts (Study 2) so as to show the relative strength of content elaboration and grammatical accuracy that were measured for the narratives of each child with SLI. The researchers in this study have compared the extent of deficiencies in content and form relative to each other and they have measured the performance of individual children. There were two kinds of dissociation among the groups.

One subgroup of children showed relative strengths in content showing weakness in accuracy of form whereas the second subgroup of children has been less noticed, perhaps because they make fewer grammatical errors. Yet, their grammaticality is accompanied by poor narrative content and reduced syntactic complexity.

Based on the results, both of the aforementioned studies demonstrated that children with Specific Language Impairment were more likely to produce stories of uneven strength—either stories with poor content that were grammatically quite accurate or stories with elaborated content that were less grammatical in comparison with their typical development age peers. These findings suggest that school-age children with SLI may struggle with the cumulative load of creating a story that is both elaborate and grammatical. They also show that the absence of errors is not definitely a sign of strength. Comparing individual differences in multiple linguistic domains, including the elaboration of content, grammatical accuracy, and syntactic complexity seems to be invaluable.

Duinmeijer et al. (2012) studied and analyzed the oral narratives and the sustained auditory attention and verbal working memory capacities of children with SLI in comparison with their chronological-age peers. The study results align with previous research findings of poor narrative skills, verbal working memory deficits and sustained auditory attention limitations in SLI. In comparison to other studies, this one detects differences between two narrative tasks in the scores they generate and in their correlations with sustained auditory attention and verbal working memory. In particular, this study assesses the narrative tasks of children with Specific Language Impairment (SLI), who are characterized by language problems, but often have problems in other cognitive domains as well. These specific narrative tasks are related to their cognitive abilities. In the current research, the sample consisted of a group of children with SLI (n = 34) and

a typically developing group ($n = 38$) from the same age range. In particular the sample consisted of 34 Dutch children with SLI (age range = 6.1 - 9.9 years, mean age = 7.4 years, $SD = 1.05$) and 38 Dutch typically developing children (TD) in the same age range (range = 6.1 - 9.9 years, mean age = 7.9 years, $SD = 1.09$). A comparison was made between a story retelling task (The Bus Story) and a story generation task (The Frog Story) and measures were applied to the sustained auditory attention (TEA-Ch) and verbal working memory (WISC digit span and the Dutch version of the CVLT-C wordlist recall). Correlations were computed between the narrative, the memory and the attention scores. The results showed that children with SLI had lower scores than typically developing children on several narrative measures as well as on sustained auditory attention and verbal working memory. A within-subjects comparison of the scores on the two narrative tasks showed a contrast between the tasks on several narrative measures. Furthermore, correlational analyses showed that on the level of plot structure, the story generation task correlated with sustained auditory attention, while the story retelling task correlated with word list recall. Mean length of utterance (MLU) on the other hand correlated with digit span but not with sustained auditory attention.

In conclusion, although children with SLI have problems with narratives in general, their performance is also dependent on the specific narrative task used for research. Various narrative tasks give different scores and are differentially correlated to cognitive skills like attention and memory, making the selection of a given task crucial in the clinical setting. Significant differences were found between the SLI and the TD group on sustained auditory attention and verbal working memory and on narrative ability. Also, the story generation task and the story retelling task yielded different outcomes and they generated significantly different scores within the SLI group. The children showed more linguistically complex sentences in the story retelling task than in the story generation task. Moreover, the two narrative tasks placed differential demands on cognitive abilities like sustained auditory attention and verbal working memory.

In a more recent study, [Auza, Harmon & Murata \(2018\)](#) examined whether language productivity measures, such as mean length of utterance (MLU), percentage of ungrammatical sentences (%UGS), total number of words (TNW), and number of different words (NDW) produced by young children during a story retell task, can be used to accurately differentiate monolingual Spanish-speaking children with SLI from children with typical language development (TLD). Also, they investigated if children with SLI differed significantly from children with TLD through lexical measures such as the TNW (Total Number of Words) and the NDW (Number of Different Words).

The sample consisted of fifty monolingual Spanish-speaking children between 4.0 and 6.11 years and they were assigned to one of two groups: 25 children with SLI and 25 TLD age-matched peers. Each child was read a scripted picture book and was asked to retell the story using pictures. Story retells were analyzed for MLU, %UGS, TNW, and NDW. Based on the results there were significant dif-

ferences between the groups on all four measures. Children with SLI showed significantly lower MLU, TNW and NDW, and significantly higher %UGS when compared with age-matched peers with TLD. As it is obvious, this research offers valuable clues regarding the measures of language productivity that can be used to accurately detect differences in language performance and differentiate monolingual Spanish-speaking children with SLI from their typically developing peers.

Vandewalle, Boets, Boons, Ghesquière & Zink (2012) conducted a longitudinal study comparing the development of oral language and more specifically narrative skills (storytelling and story retelling) in children with Specific Language Impairment (SLI) with and without literacy delay. In this study, three groups of children are compared on various oral language and narrative skills: a group with SLI and literacy delay, a group with SLI and normal literacy and a typically developing group. Consequently, the sample comprised 18 children with SLI and 18 matched controls were followed from the last year of kindergarten (mean age = 5 years 5 months) until the beginning of grade 3 (mean age = 8 years 1 month). There was a yearly administration of oral tests on the sample measuring vocabulary, morphology, sentence and text comprehension and narrative skills. Children were assessed in their oral language skills in kindergarten, grade 1 and grade 2, in their literacy skills in grade 1 and grade 3 and in their reading comprehension skills in grade 3. According to the results the children with SLI and literacy delay had persevering oral language problems across all assessed language domains. The children with SLI and normal literacy skills had also low scores in vocabulary, morphology and story retelling skills. Only on listening comprehension and storytelling, they managed to make progress towards the level of the control group. In conclusion, children with SLI and normal literacy skills presented poor oral language skills although they had an intact literacy development during the first years of literacy instruction. Yet, they improved in listening comprehension and storytelling, probably as a result of more print exposure.

In another study, Zwitserlood, Van Weerdenburg, Verhoeven & Wijnenc (2015) examined the development of morphosyntactic accuracy and grammatical complexity in Dutch School-Age Children with SLI. The investigation targeted at revealing which types of grammatical errors and which difficulties in complex syntax are most prominent for Dutch-speaking children with SLI. Therefore, the research focused on the extent that patterns of development in morphosyntactic accuracy and grammatical complexity of children with SLI differ from those observed in a chronologically same age group (CA) and a language matched group (LA). Also, they tried to find out the extent that morphosyntactic accuracy (i.e., verb-related and non-verb-related errors) and syntactic complexity in children with SLI are equally affected. The participants were 30 monolingual Dutch children with SLI, age 6.5 at first measurement (T1); 30 CA control children, age 6.6 at T1; and 30 LA control children, age 4.7 at T1. Morphosyntactic accuracy, the use of dummy auxiliaries, and complex syntax were

assessed using a narrative task that was administered at three points in time (T1, T2, T3) with 12-month intervals during a 2-year period.

Storytelling tasks were used to elicit narratives. Two monochrome picture series depicted a sequence of events that formed a coherent story. All pictures in each series are presented at the same time. The children were instructed to look at the pictures carefully and then tell the story in such a way that someone who cannot see the pictures will be able to understand the story in full. Children were not asked any questions by the investigator but they were encouraged to continue if they stopped. The results showed that on the morphosyntactic accuracy measures the group with SLI performed more poorly than both control groups. The errors in the group with SLI were higher than expected on the basis of mean length of T-units and scores on standardized language tests. Percentages of dummy auxiliaries remained high overtime. No group differences were found for grammatical complexity, except at T3, when the group with SLI used fewer relative clauses than the TD group. All in all the narrative analysis revealed different developmental routes for morphosyntactic accuracy and grammatical complexity in children with Specific Language Impairment and the other two controlled groups (the typically developing peer and language-matched children).

4.2. Studies Comparing Bilingual Children of Typical Development and Bilinguals with DLD/SLI

In their study, *Altman, Lotem, Fichman & Walters (2016)* investigated the macrostructure, microstructure, and mental state terms in the narratives of English-Hebrew bilingual preschool children with and without Specific Language Impairment. The main aim was to distinguish children with typical language development (TLD) from those with SLI. The sample consisted of thirty-one L1/English-L2/Hebrew bilingual preschool children aged 64 - 78 months. Children were divided into two groups (TLD = 19, SLI = 12) and they retold stories accompanied by six pictures that were matched across content (Baby Birds/Baby Goats) and to the extent possible across languages (first language/second language) for macrostructure (goals, attempts, and outcomes), microstructure (e.g., length, lexis, and morphosyntax), and MSTs. The macrostructure results showed similar performance in both languages for children with TLD and those diagnosed with SLI. Also, microstructure analysis of verbal productivity, length of communication units, and lexical diversity distinguished children with TLD from those with SLI. An analysis of MSTs revealed more MSTs in children's L2, in particular more mental verbs, especially early acquired perceptual and motivational verbs such as "see" and "want". Overall, distinctions between the narratives of children with TLD and SLI were found primarily for microstructure features, where error analysis was particularly important in uncovering possible markers, especially in second languages.

A more recent study by *Govindarajan & Paradis (2019)* looked at the narrative abilities of bilingual children with and without Developmental Language Dis-

order (DLD)/Specific Language Impairment (SLI). The aim of the study was the identification of the narrative components that differentiate these two groups and the designation of the role of age and input factors (age, length of L2 exposure, richness of the L2 environment, and quantity of L2 input at home) in predicting L2 narrative abilities in each group.

The sample consisted of 24 English L2 children with DLD and 63 English L2 children with TD from diverse L1 backgrounds (such as Assyrian, Mandarin, Somali, Pashto, Spanish and Arabic). Their mean age was 5.8. The majority of the children had no or very little exposure to English before they were about four years of age and they started learning English when they entered an English-speaking preschool programme. At home, parents were given questionnaires about the child's language learning history in L1 and L2 and their current language environment. The participants were applied The Edmonton Narrative Norms Instrument (ENNI) which is a normed and standardized narrative instrument that consists of two sets of stories of increasing complexity. It can also be scored for a range of story grammar and linguistic measures and can discriminate between children with TD and children with DLD. The results of the study revealed lower scores for story grammar for bilingual children with DLD with lower levels of L2 exposure than their TD peers. Yet, the scores for narrative microstructure components were similar. The researchers argue that the reason for these scores could be that story grammar skills can potentially be shared between the two languages of bilinguals because they are at the cognitive-linguistic interface, while microstructure components, which draw on particular linguistic properties of the L2 would have less potential for sharing across languages. Also, it is supported that bilingual children with TD can transfer narrative skills from their L1 to their L2 better than bilingual children with DLD. The narrative abilities for the group with TD were better but not for the group with DLD based on the Length of L2 exposure in school and richness of the L2 environment. The older bilingual children with DLD showed better narrative abilities compared to the TD group. Quantity of L2 input/output at home did not predict story grammar or microstructure abilities in either group. It is obvious that when a story generation task is applied story grammar might differentiate between children with TD and DLD better than microstructure among bilinguals with less exposure to the L2. It seems that Bilinguals with TD make more efficient use of L2 input than bilinguals with DLD. All the above are explained on the basis that bilinguals with DLD make less efficient use of the input they receive, in terms of both quantity and quality, when compared to TD bilinguals since they have limitations in language processing. However, the fact that older children with DLD outperformed younger children with DLD on certain microstructure components is explained due to maturation which possibly brings improvements to the language processing deficits in DLD. Consequently, older children gained increased proficiency in their L2 lexicon and morphosyntax, and thus, enabled them to produce better narratives.

4.3. Studies Comparing Monolingual and Bilingual Children with DLD/SLI

In a study by [Cleave, Girolametto, Chen & Johnson \(2010\)](#) the narrative abilities in monolingual and dual language learning children with SLI are investigated. In other words, it is investigated whether the narratives of monolingual children with Specific Language Impairment differed from those of dual language children with SLI. The sample consisted of twenty-six children. The participants included 14 monolingual speakers of English (ML group) and 12 dual language children (DLL group) who were exposed to another language at home at least 25% of the time and spoke that language at least 10% of the time. The Mean (SD) of their age was 3.5. In addition, all dual language children were English dominant according to their parents report. The two SLI groups were compared using standardized tests and measures from two narrative samples. The children's narrative skills were assessed using two different tasks to elicit narratives. The Renfrew Bus Story ([Renfrew, 1997](#)) was used to elicit a story retelling from each participant. The examiner told a predetermined story to the child as they both looked at 12 sequenced pictures depicting the story. The child was then asked to retell that story with the support of the pictures. The second task involved the ENNI story ([Schneider et al., 2005](#)). In this task, 13 pictures that illustrated a story were presented to the child. The child was then asked to make up a story about the pictures and tell it to the examiner who could not see the pictures. The results of the study revealed that the dual language children achieved lower scores on standardized tests of morphosyntax compared to monolinguals. Yet, their scores were not lower on measures of language form derived from the narrative samples compared to monolinguals. Both groups achieved below average scores on productivity, narrative structure, literate language, and language form measures from the narrative samples. The children's narrative skills were compared on a number of aspects and no significant differences were detected between the groups especially in the structure and language form measures, including measures of grammaticality and accuracy of tensed verbs. English standardized tests may be a biased assessment measure when used with dual language children, particularly for the assessment of expressive morphosyntactic skills and therefore it is proposed that narratives may be a more appropriate way to evaluate the language skills of bilingual children as they are more naturalistic.

In another paper by [Tsipmli, Peristeri & Andreou \(2016\)](#) the narrative production in monolingual and bilingual children with SLI is investigated. What is attempted is the identification of possible clinical markers of specific language impairment (SLI) in bilingual children with SLI by using the Greek version of the Multilingual Assessment Instrument for Narratives. The sample of the study consisted of twenty-one Greek-speaking monolingual and 15 bilingual children with SLI along with monolingual (N = 21) and bilingual (N = 15) age-matched children with typical development. In particular, 21 monolingual Greek-speaking children with SLI (7 boys, mean age = 9 years, 3 months [9.3]), 15 bilingual children with SLI (8 boys, mean age = 9.1), 21 age-matched TD monolingual (14

boys, mean age = 9.0), and 15 age-matched bilingual children (14 boys, mean age = 9.1) participated in the study. There was no significant difference in the chronological age among the groups ($p = 0.982$). In particular, the first objective of the research was to identify aspects of microstructure in narratives that are mostly affected in both monolingual and bilingual children with SLI compared to TD groups. Children with SLI were expected to produce fewer subordinate clauses and to exhibit lower lexical diversity than would TD controls. The study's second objective was to investigate whether bilingualism would accord an advantage in the performance of bilingual groups with and without SLI on narrative macrostructure. Bilinguals were expected to have an advantage and be able to take a global perspective on the story and derive the story's core aspects. Yet, this benefit was believed that it would be relatively low for bilingual children with SLI as compared to TD bilinguals, due to their weaker control over microstructure. According to the results, there were differences between the TD children and children with SLI in microstructure. Yet, in macrostructure bilingual children with SLI were found to achieve similar levels of performance, and even to outperform monolingual children with SLI. As it was first supposed the encoding of story structure in bilingual children with SLI was relatively resistant to language impairment, when compared to monolingual children with SLI.

The overall results show important SLI effects on microstructure, such as lexical diversity, as well as on the frequency of use of ISTs used to integrate and communicate the MCs' beliefs, needs, and mental and affective states. This is possibly due to their language-specific nature. In contrast, bilingualism conferred a benefit in the groups' performance on macrostructure, with bilingual children with SLI scoring at equal levels, and even outperforming, monolingual children with SLI in story structure complexity. This possibly reflects abstract structures shared between the two languages.

Rezzonico, Chen, Cleave, Greenberg, Hipfner-Boucher, Johnson, Milburn, Pelletier, Weitzman & Girolametto (2015) examined the oral narratives in monolingual and bilingual preschoolers with Specific Language Impairment. They tried to examine the similarities and differences in narrative abilities between preschoolers with and without SLI who were either monolingual or bilingual at two time points. Forty children completed a narrative retell task in English at two test points. The 20 participants with SLI included 10 monolingual speakers of English (four boys and six girls) and 10 bilingual children (six boys and four girls). The mean age (months) of the monolingual children with SLI was 51.70 (SD = 2.83) at Time 1 and 57.20 (SD = 2.82) at Time 2. The mean age of the bilingual children with SLI was 51.90 (SD = 2.88) at Time 1 and 57.90 (SD = 2.42) at Time 2. The 20 TD participants included 10 monolingual speakers of English (four boys and six girls) and 10 bilingual children (six boys and four girls). The mean age (months) of the monolingual typical developing children was 52.20 (SD = 2.57) at Time 1 and 58.30 (SD = 2.40) at Time 2. The mean age of the group of bilingual typical developing children was 53.0 (SD = 4.39) at Time 1 and 59.3 (SD = 4.05) at Time 2.

The bilingual children were from diverse first-language backgrounds and all spoke English most of the time. The performance on measures of narrative macrostructure (narrative information) and microstructure (sentence length, number of different words, verb accuracy, first mentions) in monolingual and bilingual children with and without SLI was assessed. The first question of this study examined the differences in narrative ability among the four groups of children and the second question of this study examined growth patterns in narrative ability over time.

Commenting upon the results we conclude that the macrostructure of the narrative was not affected by the presence of a language impairment to the extent as to discriminate monolingual from bilingual children. Both groups of TD children (monolingual and bilingual) had strong macrostructure scores and demonstrated growth over the two time periods. Also, TD children outperformed children with SLI in the four microstructure measures (lexical diversity, sentence length, first mentions, and verb accuracy) regardless of their bilingual status.

Bilingual children with SLI differed from bilingual TD children by obtaining lower scores in macrostructure, having a lower verb accuracy score, using a smaller number of different words and less accurately using a first mention to refer to the main character of the story. Thus, the bilingual children with SLI in the present study showed improvement over a 6-month time period and the gap with their typical peers remained similar from Time 1 to Time 2. This study showed that all four groups of children showed growth over a 6-month period and that bilingual children exposed predominantly to English at home performed similarly to their monolingual peers in measures of narrative information, sentence length, number of different words and first mentions. This study showed that TD children performed better than children with SLI on measures of English narratives, regardless of their bilingual status. More importantly, bilingual TD children obtained higher scores than children with SLI. Finally, although no difference was observed between monolingual and bilingual children with SLI, a visual inspection of growth indicated that bilingual children with SLI may demonstrate slower growth on lexical diversity and first mentions.

The research study by [Kupersmitt & Armon-Lotem \(2019\)](#) compares the narratives produced by monolingual and bilingual children with Typical Language Development (TLD) and those with Developmental Language Disorder (DLD). In particular, the linguistic expression of causal relations between the motion events within the main episode in a picture-based narrative is examined. The one hundred and fifty participants were between 5 - 7 years old and were asked to narrate a story based on a series of pictures. More specifically the sample comprised 45 Hebrew monolinguals (19 with Developmental Language Disorders [DLD]), 57 English-Hebrew bilinguals (20 with DLD) and 48 Russian-Hebrew bilinguals (21 with DLD). The groups of children were asked to produce coherent narratives so as to assemble narrative events into a causally

related, goal-oriented episode, basically composed of a goal, an attempt to reach the goal and a final outcome. Bilingual TLD children produced complex narratives that resembled those of their monolingual peers in respect to causal relations and in the use of language forms as cohesive devices. On the other hand, bilingual and monolingual children with DLD scored lower on expression of causal relations. The scores were lower for more complex scenes that demanded higher levels of linguistic complexity and content elaboration. The form-function analyses enabled an exploration of cognitive and language abilities in interaction in the context of narrative discourse production. Children with DLD present difficulties with language use in tasks with high processing demands as in narrative production. The apparent differences between children with TLD and children with DLD lead us to the conclusion that typical language development rather than the proficiency in a particular language is necessary for generating causal relations. The difficulties in discourse that children with DLD might present can be associated with subtler linguistic and cognitive difficulties, including the ability to maintain the relations between two story elements and to plan a coherent narrative.

5. Discussion

This review analyzed current studies on the narrative skills of monolingual and bilingual pre-school and primary school children with Developmental Language Disorder (DLD) aged between 4 - 9 years. In particular out of the six studies for monolinguals only two of them refer to pre-school children, whereas out of the seven studies for bilinguals five of them involve pre-school children. Studies referring to monolingual children have taken place between the years 2011-2018 with the majority of them between the years 2011-2015. On the other hand, studies referring to bilingual children were conducted from 2010-2019 with the majority of them having been conducted after 2015. Almost half of them were conducted in English-speaking countries, yet some of them involved Spanish, Italian, Dutch, Finnish and Hebrew children and were conducted in their countries accordingly.

5.1. Studies Assessing the Narrative Skills of Monolingual Children with DLD/SLI

The studies assessing the narrative skills of monolingual children with DLD/SLI focused on both the microstructure and the macrostructure of the narrative skills of the pre and school aged children (see **Table 1**). Two of the studies examined only the grammatical lexical and morphosyntactic accuracy and complexity of monolingual children with DLD (Zwitserlood et al., 2015; Colozzo et al., 2011; Auza et al., 2018). The rest of them examined both microstructure and macrostructure characteristics of DLD monolinguals and their TD peers (Colozzo et al., 2011; Mäkinen et al., 2014; Vandewalle et al., 2012; Duinmeijer et al., 2012). One of them examined some additional cognitive parameters such as

Table 1. Monolingual children.

Study	Mäkinen L, Loukusa S, Laukkanen P, Leinonen E, Kunnari S. (2014)	Colozzo P, Gillam RB, Wood M, Schnell RD, Johnston JR. (2011)	Duinmeijer I, de Jong J, Scheper A. (2012)	Auza B A, Harmon MT, Murata C. (2018)	Vandewalle E, Boets B, Boons T, Ghesquière P, Zink I. (2012)	Zwitserlood R, van Weerdenburg M, Verhoeven L, Wijnen F. (2015)
Objective	To assess linguistic productivity and complexity, grammatical and referential accuracy, event, content, the use of mental state expressions and narrative comprehension in children with SLI	To assess the relative strength of content elaboration and grammatical accuracy of the narratives of each child with SLI	To analyze the oral narratives and the sustained auditory attention and verbal working memory capacities of children with SLI in comparison with their chronological-age peers	To find out whether language productivity measures, (MLU), (%UGS), (TNW), and (NDW) produced by young children during a story retell task, can be used to accurately differentiate monolingual Spanish-speaking children with SLI from TD children	To compare the development of oral language and more specifically narrative skills (storytelling and story retelling) in children with specific language impairment (SLI) with and without literacy delay	To identify the development of morphosyntactic accuracy and grammatical complexity in Dutch school-age children with specific language impairment (SLI)
Nationality	Finnish	*British Columbia *Texas/Kansas	Dutch	Spanish	Dutch	Dutch
Sample	19 children with SLI and 19 typically developing age-matched children	2 groups of children with (SLI) and their age-matched peers	34 Dutch children with SLI & 38 Dutch (TD) in the same age range	25 children with SLI and 25 TLD age-matched peers	18 children with SLI and 18 matched controls with normal literacy were followed from the last year of kindergarten	30 monolingual Dutch children with SLI,
Pre-School children				Yes, between 4.0 and 6.11	mean age = 5 years 5 months)	30 typically developing language-matched children, age 4.7 at T1
School-aged children	Mean age 6;1 years)	Mean age = 9.0, N = 26; Mean age = 7.6, N = 40)	Mean age = 7.4 years Mean age = 7.9 years	Yes, between 4.0 and 6.11	until the beginning of grade 3 (mean age = 8 years 1 month	age 6.5 (years; months) at T1; 30 typically developing peers, age 6.6 at T1
Methodology/ instruments	Picture-elicited narrations	Test of Narrative Language (TNL; Gillam & Pearson, 2004) and analysis of the story texts	A story retelling task (The Bus Story) and a story generation task (The Frog Story)	Picture Scripted book-retelling of s story	Longitudinal study-Oral language tests measuring vocabulary, morphology, sentence and text comprehension and narrative skills	Longitudinal study of Language Development in SLI-three-group design using TD language-Storytelling tasks were used to elicit narratives. Two monochrome picture series

Continued

		Results			
Macrostructure	SLI children with fragile linguistic structure	SLI children more likely to produce stories of uneven strength—either stories with poor content or stories with elaborated content	SLI had lower scores than the TD children on several narrative measures as well as on sustained auditory attention and verbal working memory		Children with SLI and literacy delay had persevering oral language problems across all assessed language domains. The children with SLI and normal literacy skills had low scores in vocabulary, morphology and story retelling skills
	Pragmatic aspects of storytelling (referencing, event content, mental state expressions and inferencing) were demanding too	grammatically quite accurate stories but other times less grammatical	SLI children showed more linguistically complex sentences in the story retelling task than in the story generation task	Children with SLI showed significantly lower MLU, TNW and NDW, and significantly higher %UGS	On listening comprehension and storytelling, they managed to make progress towards the level of the control group On the morphosyntactic accuracy measures, the group with SLI performed more poorly than both control groups

memory and attention in children with SLI (Duinmeijer et al., 2012) and another one the pragmatic aspects of narration (Mäkinen et al., 2014). Vandewalle et al. (2012) revolved around the literacy skills of children with and without SLI.

The results of the aforementioned studies revealed that children with DLD/SLI showed difficulties in every aspect of narration in comparison to their typically developing (TD) peers. Not only do their narrations have fragile linguistic structure but the pragmatic aspects of storytelling are affected as well (Mäkinen, et al., 2014). Also, according to the results, children with DLD were more likely to produce stories of uneven strength—either stories with poor content that were almost grammatically accurate or stories with elaborated content that were less grammatical in comparison with their typical development age peers. In this case, children seem to struggle with the cumulative load of creating a story that is both elaborate and grammatical. Therefore, individual differences in multiple linguistic domains should be taken into consideration (Colozzo et al., 2011). Additionally, children with DLD apart from the poor narrative skills may exhibit verbal working memory deficits and sustained auditory attention limitations. Even the type of narration task may generate different results to children with DLD. Children appear to show more linguistically complex sentences in the story retelling task than in the story generation task (Duinmeijer et al., 2012).

Also, language productivity and performance seems to be affected in DLD children. Based on the above studies, children with DLD differed significantly from children with TLD through lexical measures such as the TNW (Total Number of Words) and the NDW (Number of Different Words). Their language productivity and performance is significantly lower than TD children (Auza et

al., 2018). Longitudinal studies on the other hand revealed that children with DLD and literacy delay scored significantly low in all assessed language domains and they had persistent oral language problems. Children with SLI and normal literacy skills had also low scores in vocabulary, morphology and story retelling skills. Children with SLI and normal literacy skills presented poor oral language skills although they had an intact literacy development during the first years of literacy instruction. Yet, they improved in listening comprehension and storytelling, probably as a result of more print exposure (Vandewalle et al., 2012). Morphosyntactic accuracy and grammatical complexity seem to be affected with SLI school-aged children who scored poorly on the basis of mean length of T-units and on standardized language tests. As far grammatical complexity is concerned DLD children formed a smaller number of relative clauses (Zwitsers et al., 2015).

5.2. Studies Assessing the Narrative Skills of TD Bilingual Children and Bilingual Children with DLD/SLI

The studies comparing the narrative skills of bilinguals with and without DLD demonstrated no significant difference in the macrostructure results in both languages for children with TD and those diagnosed with DLD (see Table 2). Yet, microstructure analysis of verbal productivity, length of communication units, and lexical diversity distinguished children with TD from those with DLD (Altman et al., 2016). Microstructure seems to be closely related and affect macrostructure in children's narratives. Other studies align with the previous results that reveal that macrostructure may be affected in bilinguals with DLD when factors such L2 exposure in school, richness of the L2 environment and age of bilinguals with DLD. Older bilingual children with DLD showed better narrative abilities compared to the TD group. Yet, quantity of L2 input/output at home is not related to either story grammar or microstructure abilities in each group. In the research of (Govindarajan & Paradis, 2019) DLD bilinguals with lower levels of L2 exposure had lower scores for story grammar than their TD peers, Yet, the scores for narrative microstructure components were similar. Bilingual children with TD can transfer narrative skills from their L1 to their L2 better than bilingual children with DLD.

5.3. Studies Assessing the Narrative Skills of Monolingual and Bilingual Children with DLD/SLI

Research on the narratives of monolinguals and bilinguals with DLD/SLI reveals that both groups show similar scores on measures of language form derived from the narrative samples, on productivity, narrative structure, literate language, and language form measures from the narrative samples (see Table 2). Only morphosyntax seems to be affected in dual language children after achieving lower scores on standardized tests (Cleave et al., 2010). Posterior studies align with the previous results revealing that monolinguals and bilinguals with DLD attain similar levels of performance. Yet, sometimes DLD bilinguals

Table 2. Bilingual children with DLD.

Monolingual and Bilingual Children with DLD						
Study	Altman, C., Armon-Lotem, S., Fichman, S., & Walters, J. (2016)	Govindarajan K, Paradis J. (2019)	Cleave PL, Girolametto LE, Chen X, Johnson CJ. (2010)	Tsipmli, I., Peristeri, E., & Andreou, M. (2016)	Rezzonico S, Chen X, Cleave PL, et al. (2015)	Kupersmitt, Judy R.; Armon-Lotem, Sharon (2019)
Objective	To distinguish children with typical language development (TLD) from those with SLI	To 1) identify the narrative components that differentiate TD and DLD groups 2) determine the role of age and input factors in predicting L2 narrative abilities in each group	To compare narrative abilities in children with specific language impairment (SLI) who are monolingual and those who are dual language learners	To identify potential clinical markers of specific language impairment (SLI) in bilingual children with SLI	To determine the similarities and differences in narrative abilities between preschoolers with and without SLI who are either monolingual or bilingual at two time points	To examine the linguistic expression of causal relations between the motion events within the main episode in a picture-based narrative
Nationality	English-Hebrew bilingual	24 English L2 learners with DLD and 63 English L2 learners with TD from diverse L1 backgrounds (such as Assyrian, Mandarin, Somali, Pashto, Spanish and Arabic)	26 children with SLI, 14 monolingual English speakers and 12 dual language learners	Greek monolinguals and Bilinguals	English monolinguals and bilinguals	45 Hebrew monolinguals (19 with Developmental Language Disorder [DLD]), 57 English-Hebrew bilinguals (20 with DLD) and 48 Russian-Hebrew bilinguals (21 with DLD)
Sample	Two groups (TLD = 19, SLI = 12)	24 English L2 with DLD and 63 English L2 learners with TD from diverse L1 backgrounds	26 children with SLI, 14 monolingual English speakers and 12 dual language learners. The dual language learners were English dominant and spoke a variety of other languages in the home	Twenty-one Greek-speaking monolingual and 15 bilingual children with SLI along with monolingual (N = 21) and bilingual (N = 15) age-matched children with typical development	20 participants with SLI included 10 monolingual speakers of English (four boys and six girls) and 10 bilingual children (six boys and four girls)	One hundred and fifty children
Pre-School children	Yes, aged 64 - 78 months	mean = 5.8	Mean (SD) 3.5			5 - 7 years
School-aged children				mean age = 9.0	mean ages = 52 and 58 months at Times 1 and 2, respectively	5 - 7 years
Methodology/ instruments	Retelling of stories accompanied by six pictures matched across content (Baby Birds/Baby Goats) and to the extent possible across languages (first language/ second language) for macrostructure, microstructure and MSTs	story generation task and a parent questionnaire	The two SLI groups were compared using standardized tests and measures from two narrative samples	Greek version of the Multilingual Assessment Instrument for Narratives.	The performance on measures of narrative macrostructure (narrative information) and microstructure (sentence length, number of different words, verb accuracy, first mentions) in monolingual and bilingual children with and without SLI.	Narration of a story, based on a series of pictures. Production of coherent narratives so as to assemble narrative events into a causally related, goal-oriented episode, basically composed of a goal, an attempt to reach the goal and a final outcome

Continued

		Results				
Macrostructure	Similar performance in both languages for children with TLD and those diagnosed with SLI	Bilinguals with DLD had significantly lower scores for story grammar than their TD peers	Both groups achieved below average scores on productivity, narrative structure, literate language, and language form measures from the narrative samples	Bilingual children with SLI were found to attain similar levels of performance, and even to outperform monolingual children with SLI, in macrostructure	All four groups of children showed growth over a 6-month period .Bil. children expose predominantly to English in the home performed similarly to their monolingual peers in measures of narrative information, sentence length, number of different words and first mentions	Bilingual and monolingual children with DLD scored lower on expression of causal relations
Microstructure	Microstructure analysis of verbal productivity, length of communication units, and lexical diversity distinguished children with TLD from those with SLI	They showed similar scores for narrative microstructure components	Dual language children lower scores on standardized tests of morphosyntax but not on measures of language form derived from the narrative samples	Differences between TD children and children with SLI in microstructure	Bilingual children exposed predominantly to English in the home performed similarly to their monolingual peers in measures of sentence length, number of different words and first mentions	Bilingual TLD children produced complex narratives that resembled those of their monolingual peers in respect of causal relations and in the use of language forms as cohesive devices

outperform monolingual children with DLD/SLI, in macrostructure. Yet, the overall results show important SLI effects on microstructure, such as lexical diversity and on the frequency of use of internal state terms (ISTs) which are used to integrate and communicate the main characters beliefs, needs, mental and affective states. In general DLD bilinguals and monolinguals seem to have weaker control over microstructure compared to their TD peers (Tsipmli et al., 2016). Other longitudinal studies reveal no significant difference between monolingual and bilingual children with DLD/SLI since the macrostructure of the narrative was not affected by the presence of a language impairment to the extent as to discriminate monolingual from bilingual children.

Yet, typical development children performed better than children with SLI/DLD on measures of English narratives and in the four microstructure measures regardless of their bilingual status. Both monolingual and bilinguals with and without DLD seem to improve over a 6-month period (Rezzonico et al., 2015). Also, it is noted that monolinguals and bilinguals of typical development can produce narratives of the same complexity in respect of causal relations and in the use of language forms as cohesive devices. Their performance contradicts the performance of bilingual and monolingual children with DLD who tend to score lower on expression of causal relations especially when it has to do with

complex scenes that demanded higher levels of linguistic complexity and content elaboration. This is justified due to the subtler linguistic and cognitive difficulties of narration, including the ability to maintain the relations between two story elements and to plan a coherent narrative (Kupersmitt & Armon-Lotem, 2019).

6. Conclusion

The purpose of this review was to present current research on the narrative skills of monolingual and bilingual pre-school and school aged children with developmental language disorder (DLD). Three important categories derive when examining studies related to our topic. Regarding the studies assessing the narrative skills of monolingual children with DLD/SLI, both microstructure and macrostructure characteristics of DLD monolinguals and their TD peers are examined. The majority of the aforementioned studies revealed that children with DLD/SLI showed difficulties in every aspect of narration in comparison to their typical development (TD) peers. In most cases, DLD children seem to struggle with the cumulative load of creating a story that is both elaborate and grammatical. The type of narrative task also plays an important role in the children's narratives since it is proved that DLD children show more linguistically complex sentences in the story retelling task than in the story generation task (Duinmeijer et al., 2012).

Literature indicates that lexical measures, language productivity, morphosyntactic accuracy, grammatical complexity literacy, cognitive deficits and poor/not elaborated content signify DLD children's poor narrative abilities compared to their TD peers. As for the studies assessing the narrative skills of bilingual children with and without DLD/SLI they demonstrated no significant difference in the macrostructure results in both languages for children with TD and those diagnosed with DLD. Microstructure seems to be affected the most, thus affecting macrostructure in some cases.

Regarding the studies assessing the narrative skills of monolingual and bilingual children with and without DLD/SLI, it is proved that monolinguals and bilinguals of typical development outperform monolinguals and bilinguals with DLD/SLI on microstructure. This happens regardless of their bilingual status. Bilingual children seem to have weaker control over microstructure compared to their TD peers. In particular, they struggle to deal with complex scenes that demand higher levels of linguistic complexity and content elaboration. Literature proved no significant differences between the group of monolinguals and bilinguals DLD/SLI performance. All these results align with previous research which demonstrates that there are differences between macro- and micro-structure (Hipfner-Boucher et al., 2015) and that micro-structural narrative ability is more sensitive to language-specific experience and input, whereas macrostructural narrative skills seem relatively independent of knowledge of a particular language (Boerma et al., 2016).

The results of the research included in this review warrant further investiga-

tion into the narrative skills of monolingual and bilingual children with DLD/SLI in their adolescence. The literature regarding monolinguals with and without DLD seems to be chronologically limited until 2015. There are also limited studies concerning the narration skills of Greek monolingual and bilingual children with DLD/SLI. Therefore, more research is needed concerning the Greek language which is characterized by rich morphology in comparison to other languages, especially English that has been mostly researched. The results of such studies would be really helpful for clinicians, teachers and speech therapists so as to avoid under or over diagnosis of bilingual children with DLD.

Moreover, it would be beneficial if more longitudinal studies were conducted so as to observe the development of narrative skills at different time points in both monolinguals and bilinguals with DLD. Also, more research is needed in order to establish the efficacy and effectiveness of narrative-based language interventions on the narrative skills of children with DLD. Long-term follow-up studies may show how and if children with DLD can struggle academically focusing on their tertiary education possibilities, future employment and income.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Aguilar-Mediavilla, E., Sanz-Torrent, M., & Serra-Raventós, M. (2002). A Comparative Study of the Phonology of Pre-School Children with Specific Language Impairment (SLI), Language Delay (LD) and Normal Acquisition. *Clinical Linguistics and Phonetics*, 16, 573-596. <https://doi.org/10.1080/02699200210148394>
- Altman, C., Armon-Lotem, S., Fichman, S., & Walters, J. (2016). Macrostructure, Microstructure, and Mental State Terms in the Narratives of English-Hebrew Bilingual Pre-school Children with and without Specific Language Impairment. *Applied Psycholinguistics*, 37, 165-193. <https://doi.org/10.1017/S0142716415000466>
- Arndt, K. B., & Schuele, M. (2012). Production of Infinitival Complements by Children with Specific Language Impairment. *Clinical Linguistics & Phonetics*, 26, 1-17. <https://doi.org/10.3109/02699206.2011.584137>
- Auza, B. A., Harmon, M. T., & Murata, C. (2018). Retelling Stories: Grammatical and Lexical Measures for Identifying Monolingual Spanish Speaking Children with Specific Language Impairment (SLI). *Journal of Communication Disorders*, 71, 52-60. <https://doi.org/10.1016/j.jcomdis.2017.12.001>
- Bedore, L. M., Pena, E. D., Gillam, R. B., & Ho, T. H. (2010). Language Sample Measures and Language Ability in Spanish-English Bilingual Kindergarteners. *Journal of Communication Disorders*, 43, 498-510. <https://doi.org/10.1016/j.jcomdis.2010.05.002>
- Befi-Lopes, D. M., Débora, M., Bento, A., Carolina P., & Perissinoto, J. (2008). Narração de histórias por crianças com distúrbio específico de linguagem. *Pró-Fono Revista de Atualização Científica*, 20, 93-98. <https://doi.org/10.1590/S0104-56872008000200004>
- Bishop, D. V., Snowling, M. J., Thompson, P. A., & Greenhalgh, T. (2017). Phase 2 of CATALISE: A Multinational and Multidisciplinary Delphi Consensus Study of Problems with Language Development: Terminology. *Journal of Child Psychology and*

- Psychiatry*, 58, 1068-1080. <https://doi.org/10.1111/jcpp.12721>
- Bishop, D. V., Snowling, M. J., Thompson, P. A., & Greenhalgh, T. (2016). Correction: CATALISE: A Multinational and Multidisciplinary Delphi Consensus Study. Identifying Language Impairments in Children. *PLoS ONE*, 11, e0168066. <https://doi.org/10.1371/journal.pone.0168066>
- Blom, E., & Boerma, T. (2016). Why Do Children with Language Impairment Have Difficulties with Narrative Macrostructure? *Research in Developmental Disabilities*, 55, 301-311. <https://doi.org/10.1016/j.ridd.2016.05.001>
- Boerma, T., Leseman, P., Timmermeister, M., Wijnen, F., & Blom, E. (2016). Narrative Abilities of Monolingual and Bilingual Children with and without Language Impairment: Implications for Clinical Practice. *International Journal of Language Communication Disorders*, 51, 626-638. <https://doi.org/10.1111/1460-6984.12234>
- Botting, N. (2010). "It's Not (Just) What You Do, but the Way That You Do It": Factors That Determine Narrative Ability in Atypical Language Learners. *Developmental Medicine and Child Neurology*, 52, 886-887. <https://doi.org/10.1111/j.1469-8749.2010.03651.x>
- Boudreau, D. (2008). Narrative Abilities: Advances in Research and Implications for Clinical Practice. *Topics in Language Disorders*, 28, 99-114. <https://doi.org/10.1097/01.TLD.0000318932.08807.da>
- Castilla-Earls, A. P., Restrepo, M. A., Perez-Leroux, A. T., Gray, S., Holmes, P., Gail, D., & Chen, Z. (2016). Interactions between Bilingual Effects and Language Impairment: Exploring Grammatical Markers in Spanish-Speaking Bilingual Children. *Applied Psycholinguistics*, 37, 1147-1173. <https://doi.org/10.1017/S0142716415000521>
- Cleave, P. L., Girolametto, L., Chen, X., & Johnson, C. J. (2010). Narrative Abilities in Monolingual and Dual Language Learning Children with Specific Language Impairment. *Journal of Communication Disorders*, 43, 511-522. <https://doi.org/10.1016/j.jcomdis.2010.05.005>
- Colozzo, P., Gillam, R. B., Wood, M., Schnell, R., & Johnston, J. (2011). Content and Form in the Narratives of Children with Specific Language Impairment. *Journal of Speech, Language, and Hearing Research*, 54, 1609-1627. [https://doi.org/10.1044/1092-4388\(2011/10-0247\)](https://doi.org/10.1044/1092-4388(2011/10-0247))
- Dipper, L., & Pritchard, M. (2017). *Discourse: Assessment and Therapy, Advances in Speech-Language Pathology*. London: IntechOpen. <https://www.intechopen.com/books/advances-in-speech-language-pathology/discourse-assessment-and-therapy>
<https://doi.org/10.5772/intechopen.69894>
- Duinmeijer, I., De Jong, J., & Scheper, A. (2012). Narrative Abilities, Memory and Attention in Children with a Specific Language Impairment. *International Journal of Language Communication Disorders*, 47, 542-555. <https://doi.org/10.1111/j.1460-6984.2012.00164.x>
- Epstein, S. A., & Phillips, J. (2009). Storytelling Skills of Children with Specific Language Impairment. *Child Language Teaching and Therapy*, 25, 285-300.
- Fey, M. E., Catts, H. W., Proctor-Williams, K., Tomblin, J. B., & Zhang, X. (2004). Oral and Written Story Composition Skills of Children with Language Impairment. *Journal of Speech, Language, and Hearing Research*, 47, 1301-1318. [https://doi.org/10.1044/1092-4388\(2004/098\)](https://doi.org/10.1044/1092-4388(2004/098))
- Fichman, S., Altman, C., Voloskovich, A., Armon-Lotem, S., & Walters, J. (2017). Story Grammar Elements and Causal Relations in the Narratives of Russian-Hebrew Bilingual Children with SLI and Typical Language Development. *Journal of Communica-*

- tion Disorders*, 69, 72-93. <https://doi.org/10.1016/j.jcomdis.2017.08.001>
- Gagarina, N., Klop, D., Kunnari, S., Tantele, K., Välimaa, T., Balčiūnienė, I., & Walters, J. (2015). Assessment of Narrative Abilities in Bilingual Children. In S. Armon-Lotem, J. de Jong, & N. Meir (Eds.), *Methods for Assessing Multilingual Children: Disentangling Bilingualism from Language Impairment* (pp. 243-276). Bristol: Multilingual Matters. <https://doi.org/10.21832/9781783093137-011>
- Gillam, R. B., & Pearson, N. (2004). *Test of Narrative Language*. Austin, TX: Pro-Ed.
- Gonsalez, D. O., Cáceres, M. A., Bento-Gaz, A. C. P., & Befi-Lopes, D. M. (2012). The Complexity of Narrative Interferes in the Use of Conjunctions in Children with Specific Language Impairment. *Jornal da Sociedade Brasileira de Fonoaudiologia*, 24, 152-156. <https://doi.org/10.1590/S2179-64912012000200011>
- Govindarajan, K., & Paradis, J. (2019). Narrative Abilities of Bilingual Children with and without Developmental Language Disorder (SLI): Differentiation and the Role of Age and Input Factors. *Journal of Communication Disorders*, 77, 1-16. <https://doi.org/10.1016/j.jcomdis.2018.10.001>
- Guo, L. Y., Tomblin, J. B., & Samelson, V. (2008). Speech Disruptions in the Narratives of English-Speaking Children with Specific Language Impairment. *Journal of Speech, Language, and Hearing Research*, 51, 722-738. [https://doi.org/10.1044/1092-4388\(2008/051\)](https://doi.org/10.1044/1092-4388(2008/051))
- Gutiérrez-Clellen, V. F., & Simon-Cereijido, G. (2007). The Discriminant Accuracy of a Grammatical Measure with Latino English-Speaking Children. *Journal of Speech, Language, and Hearing Research*, 50, 968-981. [https://doi.org/10.1044/1092-4388\(2007/068\)](https://doi.org/10.1044/1092-4388(2007/068))
- Hayward, D. V., Gillam, R. B., & Lien, P. (2007). Retelling a Script-Based Story: Do Children with and without Language Impairments Focus on Script and Story Elements? *American Journal of Speech Language Pathology*, 16, 235-245. [https://doi.org/10.1044/1058-0360\(2007/028\)](https://doi.org/10.1044/1058-0360(2007/028))
- Hipfner-Boucher, K., Milburn, T., Weitzman, E., Greenberg, J., Pelletier, J. & Girolametto, L. (2015). Narrative Abilities in Subgroups of English Language Children and Monolingual Peers. *International Journal of Bilingualism*, 19, 677-692.
- Iluz-Cohen, C. P., & Walters, J. (2012). Telling Stories in Two Languages: Narratives of Preschool Children with Typical and Impaired Language. *Bilingualism: Language and Cognition*, 15, 58-74. <https://doi.org/10.1017/S1366728911000538>
- Jones, S. T. (2015). *Story Generation in Five School-Aged Children with Language Impairment*. All Theses and Dissertations, 6143. <https://scholarsarchive.byu.edu/etd/6143>
- Justice, L. M., Bowles, R. P., Kaderavek, J. N., Ukrainetz, T. A., Eisenberg, S. L., & Gillam, R. B. (2006). The Index of Narrative Microstructure: A Clinical Tool for Analyzing School Age Children's Narrative Performance. *American Journal of Speech-Language Pathology*, 15, 177-191. [https://doi.org/10.1044/1058-0360\(2006/017\)](https://doi.org/10.1044/1058-0360(2006/017))
- Justice, L. M., McGinty, A. S., Piasta, S. B., Kaderavek, J. N., & Fan, X. (2010). Print-Focused Read-Alouds in Preschool Classrooms: Intervention Effectiveness and Moderators of Child Outcomes. *Language, Speech, and Hearing Services in Schools*, 41, 504-520. [https://doi.org/10.1044/0161-1461\(2010/09-0056\)](https://doi.org/10.1044/0161-1461(2010/09-0056))
- Kuhl, K. P. (2004). Early Language Acquisition: Cracking the Speech Code. *Nature Reviews Neuroscience*, 5, 831-843. <https://doi.org/10.1038/nrn1533>
- Kupersmitt, J. R., & Armon-Lotem, S. (2019). The Linguistic Expression of Causal Relations in Picture-Based Narratives: A Comparative Study of Bilingual and Monolingual Children with TLD and DLD. *First Language*, 39, 319-343. <https://doi.org/10.1177/0142723719831927>

- Laasonen, M., Smolander, S., Lahti-Nuutila, P. et al. (2018). Understanding Developmental Language Disorder—The Helsinki Longitudinal SLI Study (HelSLI): A Study Protocol. *BMC Psychology*, 6, Article No. 24.
<https://doi.org/10.1186/s40359-018-0222-7>
- Leonard, L. B. (2014). *Children with Specific Language Impairment* (2nd ed.). Cambridge, MA: MIT Press. <https://doi.org/10.7551/mitpress/9152.001.0001>
- Leonard, L. B., & Deevy, P. (2004). Lexical Deficits in Specific Language Impairment. In L. Verhoeven, & H. Van Balkom (Eds.), *Classification of Developmental Language Disorders: Theoretical Issues and Clinical Implications* (pp. 209-233). Mahwah, NJ: Lawrence Erlbaum.
- Linnik, A., Bastiaanse, R., & Höhle, B. (2016). Discourse Production in Aphasia: A Current Review of Theoretical and Methodological Challenges. *Aphasiology*, 30, 765-800.
<https://doi.org/10.1080/02687038.2015.1113489>
- Lyytinen, H., Erskine, J., Hämäläinen, J., Torppa, M., & Ronimus, M. (2015). Dyslexia-Early Identification and Prevention: Highlights from the Jyväskylä Longitudinal Study of Dyslexia. *Current Development Disorders Reports*, 2, 330-338.
<https://doi.org/10.1007/s40474-015-0067-1>
- Mäkinen, L., Loukusa, S., Laukkanen, P., Leinonen, E., & Kunnari, S. (2014). Linguistic and Pragmatic Aspects of Narration in Finnish Typically Developing Children and Children with Specific Language Impairment. *Clinical Linguistics & Phonetics*, 28, 413-427. <https://doi.org/10.3109/02699206.2013.875592>
- Mayer, M. (1969). *Frog, Where Are You?* New York, NY: Penguin Group Publishers.
- McCabe, A., & Rollins, P. (1994). Assessment of Preschool Narrative Skills. *American Journal of Speech-Language Pathology*, 3, 45-56.
<https://doi.org/10.1044/1058-0360.0301.45>
- McGregor, K. K., Newman, R. M., Reilly, R. M., & Capone, N. (2002). Semantic Representation and Naming in Children with Specific Language Impairment. *Journal of Speech, Language, and Hearing Research*, 45, 998-1014.
[https://doi.org/10.1044/1092-4388\(2002\)081](https://doi.org/10.1044/1092-4388(2002)081)
- Moher, D., Cook, D. J., Eastwood, S., Olkin, I., Rennie, D., & Stroup, D. F. (1999). Improving the Quality of Reports of Meta-Analyses of Randomised Controlled Trials: The QUOROM Statement. Quality of Reporting of Meta-Analyses. *The Lancet*, 354, 1896-1900. [https://doi.org/10.1016/S0140-6736\(99\)04149-5](https://doi.org/10.1016/S0140-6736(99)04149-5)
- Mpaka, F., Vlassopoulou, M., & Drakos, G. (2012). Study of Narrative Speech in Children with Special Developmental Disorder (SDD) of Speech through the Bus StoryTest. In *12th Panhellenic Conference of Speech Therapists—Speech Therapists: Clinical Interventions in Speech and Communication Disorders*. Athens: Panhellenic Association of Speech Therapists-Speech Therapists. (In Greek)
- Paradis, J., Crago, M., Genesee, F., & Rice, M. (2003). French-English Bilingual Children with SLI: How Do They Compare with Their Monolingual Peers? *Journal of Speech, Language, and Hearing Research*, 46, 113-127.
[https://doi.org/10.1044/1092-4388\(2003\)009](https://doi.org/10.1044/1092-4388(2003)009)
- Ralli, A. M., & Sidiropoulou, T. (2012). The Importance of Retelling for the Development of Narrative Skills of Preschool Children. *Επιστήμες Αγωγής*, 1, 13-15. (In Greek)
- Redmond, S. M. (2004). Conversational Profiles of Children with ADHD, SLI and Typical Development. *Clinical Linguistics & Phonetics*, 18, 107-125.
<https://doi.org/10.1080/02699200310001611612>
- Reilly, J., Losh, M., Bellugi, U., & Wulfeck, B. (2004). “Frog, Where Are You?” Narratives

in Children with Specific Language Impairment, Early Focal Brain Injury, and Williams Syndrome. *Brain and Language*, 88, 229-247.

[https://doi.org/10.1016/S0093-934X\(03\)00101-9](https://doi.org/10.1016/S0093-934X(03)00101-9)

Renfrew, C. (1997). *Bus Story Test: A Test of Narrative Speech*. Oxford: Speechmark Publishing Ltd.

Reuterskiöld, C., Hansson, K., & Sahlén, B. (2011). Narrative Skills in Swedish Children with Language Impairment. *Journal of Communication Disorders*, 44, 733-744.

<https://doi.org/10.1016/j.jcomdis.2011.04.010>

Rezzonico, S., Chen, X., Cleave, P. L., Greenberg, J., Hipfner-Boucher, K., Johnson, J. C., Milburn, T., Pelletier, J., Weitzman, E., & Girolametto, L. (2015). Oral Narratives in Monolingual and Bilingual Preschoolers with SLI. *International Journal of Language and Communication Disorders*, 50, 830-841. <https://doi.org/10.1111/1460-6984.12179>

Schneider, P., Dubé, R. V., & Hayward, D. (2005). *The Edmonton Narrative Norms Instrument*. Edmonton, AB: Faculty of Rehabilitation Medicine, University of Alberta.

<http://www.uab.ca/eni>

Squires, K. E., Lugo-Neris, M. J., Peña, E. D., Bedore, L. M., Bohman, T. M., & Gillam, R. B. (2014). Story Retelling by Bilingual Children with Language Impairments and Typically Developing Controls. *International Journal of Language Communication Disorders*, 49, 60-74. <https://doi.org/10.1111/1460-6984.12044>

Tannen, D., Hamilto, H. E., & Schiffrin, D. (Eds.) (2015). *The Handbook of Discourse Analysis*, 2. Chichester, Malden: Wiley Blackwell.

<https://doi.org/10.1002/9781118584194>

Theodorou, E., & Grohmann, K. K. (2010). Narratives in Cypriot Greek Mono- and Bilingual Children with SLI. In A. Botinis (Ed.), *Proceedings of the Third ISCA Tutorial and Research Workshop on Experimental Linguistics* (pp. 185-188). Athens: ISCA & University of Athens.

Theodorou, E., Kambanaros, M., & Grohmann, K. K. (2012). Issues in the Diagnosis of SLI in Cypriot Greek Bilingual Children. In *Modern Greek Dialects and Linguistics Theory* (pp. 463-474).

Thomson, J. (2005). Theme Analysis of Narratives Produced by Children with and without Specific Language Impairment. *Clinical Linguistics & Phonetics*, 19, 175-190.

<https://doi.org/10.1080/02699200410001698616>

Tomas, E., & Vissers, C. (2019). Behind the Scenes of Developmental Language Disorder: Time to Call Neuropsychology Back on Stage. *Frontiers in Human Neuroscience*, 12, 517. <https://doi.org/10.3389/fnhum.2018.00517>

Tomblin, J. B., Records, N. L., Buckwalter, P., Zhang, X., Smith, E., & O'Brien, M. (1997). Prevalence of Specific Language Impairment in Kindergarten Children. *Journal of Speech, Language, and Hearing Research*, 40, 1245-1260.

<https://doi.org/10.1044/jslhr.4006.1245>

Tribushinina, E., & Dubinkina, E. (2012). Adjective Production by Russian-Speaking Children with Specific Language Impairment. *Clinical Linguistics and Phonetics*, 26, 554-571. <https://doi.org/10.3109/02699206.2012.666779>

Tribushinina, E., Dubinkina, E., & Sanders, T. (2015). Can Connective Use Differentiate between Children with and without Specific Language Impairment? *First Language*, 35, 3-26. <https://doi.org/10.1177/0142723714566334>

Tsipmli, I., Peristeri, E., & Andreou, M. (2016). Narrative Production in Monolingual and Bilingual Children with Specific Language Impairment. *Applied Psycholinguistics*, 37, 195-216. <https://doi.org/10.1017/S0142716415000478>

- Vandewalle, E., Boets, B., Boons, T., Ghesquiere, P., & Zink, I. (2012). Oral Language and Narrative Skills in Children with Specific Language Impairment with and without Literacy Delay: A Three-Year Longitudinal Study. *Research in Developmental Disabilities, 33*, 1857-1870. <https://doi.org/10.1016/j.ridd.2012.05.004>
- Vissers, C., & Koolen, S. (2016). Theory of Mind Deficits and Social Emotional Functioning in Preschoolers with Specific Language Impairment. *Frontiers in Psychology, 7*, 1734. <https://doi.org/10.3389/fpsyg.2016.01734>
- Zwitserslood, R., Van Weerdenburg, M., Verhoeven, L., & Wijnen, F. (2015). Development of Morphosyntactic Accuracy and Grammatical Complexity in Dutch School-Age Children with SLI. *Journal of Speech, Language, and Hearing Research, 58*, 891-905. https://doi.org/10.1044/2015_JSLHR-L-14-0015