

Reading and Writing Skills in Developmental Language Disorder: Parental Perception

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Abstract

Reading and writing skills appear as one of the most persistent difficulties that people with Developmental Language Disorder (DLD) present throughout their schooling. The objective of this study was to know the parents' perception of these deficits. The sample consisted of 45 families of children and adolescents with DLD. The participants were evaluated through the Celf 5 questionnaire for parents on linguistic competence that collects data on the following areas: listening, speaking, reading and writing. This study describes reading and writing data. The sample consisted of 45 families of children and adolescents with DLD. The results indicate that most of parents manifest problems in all reading areas (especially reading comprehension) and writing (format and content) areas, which influence their academic development. These data support the importance of working on Reading and writing skills in all educational stages. The perception of families is very similar to what the scientific literature affirms. In addition, these data highlight the importance of the work of families in the educational development of people with DLD.

Keywords: Developmental Language Disorder; parental perception, verbal language; written language.

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1. Introduction

Delays in the acquisition and development of language—when not induced by any known neurological, intellectual, auditory, emotional, physical or sociocultural deprivation deficit—, with the capacity to affect all or some of the phonological, semantic, morphosyntactic, pragmatic and discourse language areas, is what the empirical-clinical research refers to as Specific Language Impairment (Acosta, Ramírez-Santana and Hernández, 2016; Buiza. et al 2015; Govindarajan y Paradis, 2019; Laasonen et al., 2018; Mendoza, 2016; Szenkman, Fumagalli & Martínez-Cuitiño, 2015). Specific Language Impairment or Developmental Language Disorder (hereinafter DLD) is a childhood disorder in verbal communication and is characterized by the appearance of difficulties in the various components of language (Auza, Harmon y Murata, 2018; Castro-Rebolledo, Giraldo-Prieto, Hincapié-Henao, Lopera & Pineda, 2004, Coloma et al., 2020).

The prevalence of DLD is estimated between 6% and 7% of the child population (Adlof y Hogan, 2018; Christensen et al., 2019; Mendoza, 2016). Despite its high prevalence, it is still a little-known disorder in some health and educational settings.

Detailed knowledge of the linguistic profile of people with DLD should be considered essential in any approach to language intervention (Moraleda y López, 2022). Regarding verbal language, there are a variety of degrees in the difficulties experienced in the different language areas. For example, in the phonetic-phonological sphere, people with DLD have difficulties using speech sounds correctly at a level corresponding to their age (Stoel-Gammon, 2018; Torres-Bustos & Soto-Barba, 2016; Vuolo y Goffman, 2020), but exhibit no difficulties or physical anomalies of the organs involved in pronunciation. Moreover, these production errors at the phonological level are persistent over time (Aguado, Coloma, Martínez, Mendoza & Montes, 2015; Artuso, Fratini y Belacchi, 2021).

On a semantic level, the difficulties in this area are visible early on. The learning of new words will be impaired throughout the life cycles of people with DLD (Alt & Plante, 2006, Ponari et al., 2018), causing limited lexical breadth and depth (Jackson, Leitão, Claessen y Boyes, 2019; McGregor, Oleson, Bahnsen & Duff, 2013). These traits go hand in hand with a small vocabulary—resorting to circumlocutions and semantic substitutions to compensate for difficulties accessing lexicon—and a discontinuous flow of speech, cluttered with pauses, interjections and repetitions (Drljan y Vuković, 2019; Mendoza, 2012).

In the area of morphosyntax, it must be taken into account that knowledge of this area's development is an essential marker for the diagnosis of this disorder (Martínez, 2015), and is also an important predictor in later language skills (Botting, Faragher, Simkin, Knox & Conti-Ramsden, 2001, Calder, Claessen, Leitão y Ebbels, 2021). For example, people with DLD tend to use simple syntactic structures with combinations of two or three elements and less use of compound sentences, due to difficulties in abstracting the implicit rules of grammar (Acosta, 2012; Balthazar, Ebbels y Zwitserlood, 2020). Similarly, there are difficulties in the use and understanding of personal and possessive pronouns, as well as in the production of plurals and gender, person

and verbal inflection marks (Sanz-Torrent, Serrat, Andreu & Serra, 2008). In addition, the morphology is primary, with a juxtaposition of words due to the absence of relational elements or function words such as determiners, pronouns or prepositions (Oetting y Hadley, 2017; Serra, Aguilar and Sanz, 2002).

Specific difficulties at the pragmatic level are also worth highlighting. For example, people with DLD do not competently engage in social practices (Adams, Lockton y Collins, 2018; Marton et al., 2005), and also experience difficulties in making inferences and understanding double meanings (Conti-Ramsden et al., 2019; Norbury, 2005), false beliefs (Farrar et al., 2009), social situations (Ebbels, et al., 2017; Rinaldi, 2000), communicative interactions (Andrés-Roqueta & Clemente, 2010; Camaioni, 2017) and figurative meanings (Andrés, Flores & Clemente, 2011), while also exhibiting limitations in the initiation of conversations (Herrero y Lorenzo, 2020; Serra, 2002). While speaking on a subject, difficulties arise concerning staying on topic, referential skills, time and causal relationships, etc., which fundamentally depend on the involvement and integration of linguistic, cognitive and social skills (Aguado, Maggiolo, Coloma, Pavez & Pemjean, 2006; Hendricks, Adolf, Alonzo, Fox y Hogan, 2019).

Focusing now specifically on the development of written language, it should be noted that this process entails a great challenge for students with DLD (Acosta, 2005; Adolf y Hogan, 2018). When speaking of such a heterogeneous disorder, it should be noted that children who progress further in language skills attain a better reading performance, which is more appropriate to their evolutionary age (Bishop & Adams, 1990; Catts et al., 2002, Duff, Hendricks, Fitton y Adolf, 2021). In this manner, there may be sufferers of DLD with adequate reading skills but also cases of students who exhibit difficulties in reading comprehension or even decoding and reading comprehension (Bishop et al., 2009; Coloma et al., 2012; Kelso et al., 2012; Kelso et al. al., 2007; Snowling, Hayiou-Thomas, Nash y Hulme, 2020).

Several authors have shown that the reading difficulties of these students are manifested in various activities such as mirror writing of letters and numbers, difficulty recognizing and reading scripts, difficulties in tasks directed at metaphonological skills such as word segmentation in syllables, spelling, or identification of the initial or final phonemes, difficulties in letter identification and in phoneme-grapheme association and difficulty in recognizing high-frequency words in the classroom such as the name of their classmates or the name of the different spaces (Adlof, Baron, Bell y Scoggins, 2021; Coloma Tirapegui, Cárdenas Gajardo & De Barbieri Ortiz, 2005; Mendoza, 2012).

In addition, numerous pieces of research suggest that the phonological deficits exhibited by people with DLD directly influence reading (Alonzo, McIlraith, Catts y Hogan, 2020; Mainela-Arnold & Evans, 2005; Montgomery, Magimairaj & Finney, 2010). These studies indicate that this limitation makes it difficult to form the phonological representations of words, a difficulty that is more evident in words with a lower frequency of use (Lee, Ng & Ng, 2009), i.e. the words responsible for syntactic structuring (function words) and derivative and inflectional elements. Orthography mistakes are also very common in writing in DLD compared to their peers in mental age or even compared to people with Autism Spectrum Disorder (Peristeri, & Tsimpli, 2022).

It may thus be concluded that, in principle, the reading and writing learning process of DLD students differs only in the degree of difficulty they experience compared to their peers. And it is precisely the high degree of difficulty exhibited by these students that has led authors like Solla (2013) to advocate for acting preventively in educational contexts, not only to minimize these difficulties but also to make adaptations in aspects such as content or methodology (McGregor, 2020).

Therefore, the goal of this study was to determine the level of verbal and written language possessed by children and adolescents with DLD, according to the perception of their parents, in order to subsequently analyze the implications thereof in people with DLD.

2. Method

2.1 Participants

The sample consisted of a group of 45 families with small children and adolescents aged between 6 and 17 years, of which 30 families had small children with DLD between the ages of 6 and 11 and 15 families had adolescents with DLD between the ages of 12 and 17. The mean age of the group of small children was 8.14 years (TD = 1.5), while in the group of adolescents it was 14.6 years (TD = 1.61). The families whose children had DLD were mostly represented by the children's mothers, with only two fathers participating. The sex of their children was female for 10 of them and male for 35.

2.2 Process

Firstly, several DLD associations and private clinics were contacted in order to meet the people who had been diagnosed and determine their interest in participating in this study. The parents were subsequently informed in writing about the intended study. Once the families accepted and their participation was confirmed, the informed consent form was sent to them. The informed consent form was approved by the pertinent Ethics Committee of the University. After this document was signed, the linguistic competence questionnaire—addressed to the

parents in the CELF 5 test—was delivered and then filled out manually and on paper. The questionnaire was completed in a single session in a designated timeframe of 20 minutes.

2.3. Instruments

To carry out the assessment, the questionnaire for parents in the standardized CELF 5 test was used: the Language Competence Questionnaire (Wiig, Semel and Secord, 2013). This scale consists of 40 items that record perception regarding the areas of speech (16 items), listening (8 items), reading (6 items) and writing (6 items) of small children (from the age of 5) and teenagers. This scale can be completed by parents and/or teachers. The results are collected on a Likert-type scale from 1 to 4 (1 = never or almost never, 2 = sometimes, 3 = often, 4 = always or almost always).

3. Results

The results were analyzed taking into account the four areas into which the questionnaire is divided and the two groups of participants.

3.1 Listening

First, when it comes to understanding, 50% of parents of small children and adolescents with DLD reported that their children sometimes find it difficult to pay attention. In addition, 50% of the respondents reported often experiencing difficulties in following verbal prompts from their children with DLD, while 36.7% said this occurred at times.

In this section, the parents of small children with DLD mainly noted more difficulties in maintaining concentration, following verbal instructions and looking at others when speaking or listening than the parents of adolescents with DLD. On the contrary, the latter declared having observed more difficulties in understanding new concepts and in looking at others when speaking or listening, this being more closely linked to general understanding. However, the results can be seen in more detail in Table 1.

3.2 Speaking

Parents' perception is that people with DLD experience the greatest difficulties in almost all areas related to language production. More detailed results can be seen in Table 2.

In the analysis between age groups, it may be observed that the parents of small children with DLD stated that they had noticed more difficulties regarding the topic of conversation, the use of a varied vocabulary, and poor grammar when their children were speaking. The parents of the adolescents with DLD, on the other hand, claimed to have perceived more difficulties in reformulating discourse, describing others, making requests for help and accessing vocabulary. However, it seems that the difficulties are steady over time and continue during the transition from childhood to adolescence.

3.3 Reading

In the area of reading, it is observed that, in general, the parents of small children with DLD reported having perceived more difficulties in identifying the main idea of the text, reading comprehension and in following written orders compared to adolescents with DLD. The perception of parents, therefore, indicates fewer problems in this area as the age of their children increases. The data is shown in detail in Table 3.

3.4. Writing

The trend in the area of writing is similar to the area of reading. Parents of adolescents with DLD report fewer problems in this area than the group of parents of small children with DLD, although there is a different pattern. For example, parents of small children with DLD reported having noticed more difficulties in their children when writing their thoughts and when they had to develop an answer or give details in writing. In contrast, parents of adolescents with DLD stated that the most striking difficulties of their children when they wrote were related to poor grammar, their ability to write their thoughts down and to write a detailed written response, as described in Table 4.

What seems clear is that there are writing deficits in both age groups, especially when it comes to content.

5. Discussion

This research has revealed the verbal and written language difficulties that people with DLD experience throughout their schooling (Primary and Secondary Education) from the point of view of the parents. Concerning verbal language, it seems clear that both listening and speaking deficits may appear in the different items, although it is fundamentally in the latter area (speech), related to verbal expression and production, that parents note the greatest complications.

The scientific evidence put forward in recent years clearly details the verbal language problems that already

begin to develop in childhood. However, there is still little research focusing strictly on specific verbal difficulties in adolescents, although it is true—as observed in the results obtained—that these difficulties continue throughout their development and affect them in their daily lives (Conti-Ramsden & Durkin, 2008; Durkin & Conti-Ramsden, 2007; Lyons y Roulstone, 2018). Our data reveals that most of the items in which parents observed specific difficulties are mainly related to pragmatic skills, in line with other research (Bishop, Chan, Adams, Hartley & Weir, 2000; Craig, 1991; Ryder, Leinonen & Schulz, 2008; Ying, Carter y Stephenson, 2018), followed by morphosyntactic (Buiza, Rodríguez-Parra, González-Sánchez & Adrián, 2016; Ronderos, 2021) and semantic deficits (Peña, Bedore, Lugo-Neris y Albudoor, 2020; Sheng & McGregor, 2010).

In addition, these results are in line with other research demonstrating the connection between language difficulties and reading and writing problems in school-age children with DLD (Bishop & Adams, 1990; Coloma et al., 2015; Earle y Del Tufo, 2021). This evolution is observed through the direct relationship between the persistence of language difficulties at school age and problems in learning to read, since students who progress in their language skills attain a better and more age-appropriate reading performance (Bishop & Adams, 1990; Catts et al., 2002; Doust et al., 2020). It should also be borne in mind that people with DLD experience long-term continuous deficits in reading skills from childhood to adolescence (Clair, Durkin, Conti-Ramsden & Pickles, 2010). Along the same lines, it seems that writing performance is determined by the level of vocabulary (Dockrell, Lindsay & Connelly, 2009, Wright, Pring y Ebbels, 2018), leading to more limited writing skills with poor structure and little evidence of ideas and organization (Dockrell, Lindsay, Connelly & Mackie, 2007; Gray et al., 2019). To this must be added that many studies indicate a relationship and comorbidity between DLD and dyslexia (Adlof, 2020; Adlof & Hogan, 2018; Bishop & Snowling, 2004; Catts, Adlof, Hogan & Weismer, 2005).

Therefore, it seems clear that deficits in reading and writing are more significant in the population with DLD than in the general population (Joye, Broc, Olive y Dockrell, 2019; Mendoza, Carballo, Muñoz & Fresneda, 2005). These difficulties occur both in reading (reading of words and pseudowords, literal and inferential comprehension) (Ferrer, González and Quispiricra, 2019), and when writing and reasoning, as is also observed in the results obtained, according to the perception of the parents. These same informants reveal that language disorders arising in childhood can later be predictors of lower academic performance at school (Hall & Segarra, 2007; Miller et al., 2017). However, we believe that an important finding of our research is that, contrary to what occurs in verbal development, it appears that reading and writing difficulties become less pronounced in adolescence.

Therefore, it must be taken into account that all these difficulties throughout the various evolutionary stages will influence the socio-emotional development of people with DLD, which is why it is very important to advance a globalized intervention model at the school and clinical level. There is a direct relationship between language disorders and emotional competence (Baixauli-Fortea, Roselló-Miranda & Colomer-Diago, 2015). Brinton et al. (2000) explain that these children's difficulties in language will lead to difficulties in social relationships due to withdrawal and lack of prosocial skills, which worsen over time. Authors such as Bishop (1997) consider, in fact, that there are three models that relate socio-emotional competence with DLD: model A, which defends that difficulties in information processing give rise to difficulties in social communication skills; model B, which postulates that language deficits are those causing difficulties in social interaction, and model C, which directly examines the relationship between social cognition and pragmatic language disorders.

As future lines of research, we consider that it is necessary to evaluate reading and writing skills from the point of view of all the agents involved: teachers, families and the people with DLD themselves to try to propose a global and coordinated intervention. For this reason, it is necessary to pay attention to the evolution of the characteristics of verbal and written language throughout the schooling of people with DLD, since these difficulties do not occur in isolation and independently, but rather directly influence the rest of the development areas. In conclusion, people with DLD require not only linguistic intervention but also direct intervention in socio-emotional aspects to minimize the problems arising as a consequence of this diagnosis.

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Table 1. Perception of parents in the area of listening

		Never or almost never	Sometimes	Often	Always or almost always
Has trouble paying attention	Children	3.6%	50%	25%	21.4%
	Teenagers	21.4%	50%	7.1%	21.4%
Has trouble following verbal instructions	Children	10.7%	35.7%	50%	3.6%
	Teenagers	21.4%	42.9%	21.4%	14.3%
Has trouble remembering what is said	Children	10.7%	53.6%	32.1%	3.6%
	Teenagers	14.3%	50%	21.4%	14.3%
Has trouble understanding what is said	Children	14.3%	64.3%	21.4%	0%
	Teenagers	14.3%	50%	28.6%	7.1%
Has to ask for what is said to be repeated	Children	21.4%	53.6%	17.9%	7.1%
	Teenagers	28.6%	42.9%	28.6%	0%
Has trouble understanding new concepts	Children	14.3%	57.1%	28.6%	0%
	Teenagers	7.1%	35.7%	50%	7.1%
Has trouble looking at others when speaking or listening	Children	10.7%	50%	32.1%	7.1%
	Teenagers	0%	28.6%	42.6%	28.6%
Has trouble understanding facial expressions, gestures, or body language	Children	46.4%	35.7%	14.3%	3.6%
	Teenagers	21.4%	35.7%	28.6%	14.3%

Table 2. Parental perception in the area of speech

		Never or almost never	Sometimes	Often	Always or almost always
Has trouble answering what is asked	Children	14.0%	53.6%	25%	7.1%
	Teenagers	7.1%	42.9%	35.7%	14.3%
Has trouble answering questions as quickly as other students	Children	10.7%	17.9%	39.3%	32.1%
	Teenagers	7.1%	42.9%	35.7%	14.3%
Has trouble asking for help when needed	Children	28.6%	39.3%	21.4%	10.7%
	Teenagers	-	7.1%	57.1%	35.7%

		Never or almost never	Sometimes	Often	Always or almost always
Has trouble asking questions	Children	21.4%	42.9%	17.9%	17.9%
	Teenagers	21.4%	21.4%	35.7%	21.4%
Has trouble using varied vocabulary when speaking	Children	7.1%	17.9%	53.6%	21.4%
	Teenagers	7.1%	42.9%	28.6%	21.4%
Has trouble thinking of (finding) the right word	Children	10.7%	35.7%	42.9%	10.7%
	Teenagers	-	28.6%	50%	21.4%
Has trouble expressing his/her thoughts	Children	3.6%	32.1%	39.3%	25%
	Teenagers	-	28.6%	57.1%	14.3%
Has trouble describing things to others	Children	14.3%	32.1%	35.7%	17.9%
	Teenagers	-	35.7%	35.7%	28.6%
Has trouble focusing on the topic of conversation	Children	3.6%	28.6%	39.3%	28.6%
	Teenagers	-	28.6%	21.4%	50%
Has trouble ordering events properly when telling a story or talking about something that happened	Children	-	28.6%	39.3%	32.1%
	Teenagers	14.3%	42.9%	28.6%	14.3%
Exhibits poor grammar when speaking	Children	7.1%	25%	35.7%	32.1%
	Teenagers	14.3%	35.7%	21.4%	28.6%
Has trouble forming complete sentences when speaking	Children	17.9%	35.7%	25%	21.4%
	Teenagers	-	42.9%	28.6%	28.3%
Speaks in short sentences, without grammatical ties	Children	28.6%	28.6%	17.9%	25%
	Teenagers	-	28.6%	42.9%	28.6%
Has trouble expanding on an answer or giving details when speaking	Children	14.3%	25%	32.1%	28.6%
	Teenagers	14.3%	42.9%	14.3%	28.6%
Has trouble having a conversation with someone	Children	42.9%	25%	25%	7.1%
	Teenagers	28.6%	28.6%	14.3%	28.6%
Has trouble talking to a group of people	Children	28.6%	25%	28.6%	17.9%
	Teenagers	14.3%	35.7%	14.03%	35.7%
Has trouble saying something in another way when someone does not understand	Children	10.7%	32.6%	28.6%	28.6%
	Teenagers	7.1%	21.4%	57.1%	14.3%
Gets upset when not understood	Children	7.1%	42.9%	21.4%	28.6%
	Teenagers	21.4%	35.7%	28.6%	14.3%

Table 3. Parents' perception of the area of reading

		Never or almost never	Sometimes	Often	Always or almost always
Has trouble pronouncing words when reading	Children	10.7%	46.4%	21.4%	21.4%
	Teenagers	50%	35.7%	14.3%	-
Has trouble understanding what he/she reads	Children	7.1%	35.7%	28.6%	28.6%
	Teenagers	-	35.7%	57.1%	7.1%
Has trouble explaining what he/she has read	Children	7.1%	21.4%	32.1%	39.3%
	Teenagers	-	28.6%	64.3%	7.1%
Has trouble identifying the main idea	Children	3.6%	25%	46.4%	25%
	Teenagers	-	42.9%	35.7%	21.4%
Has trouble remembering details	Children	21.4%	17.9%	35.7%	25%
	Teenagers	7.1%	28.6%	50%	14.3%
Has trouble following written instructions	Children	7.1%	25%	42.9%	25%
	Teenagers	-	28.6%	64.3%	7.1%

Table 4. Parents' perception in the area of writing

		Never or almost never	Sometimes	Often	Always or almost always
Has trouble writing down his/her thoughts	Children	3.6%	25%	32.1%	39.3%
	Teenagers	-	35.7%	42.9%	21.4%
Poor grammar when writing	Children	7.1%	17.9%	32.1%	42.9%
	Teenagers	-	35.7%	28.6%	35.7%
Has trouble writing complete sentences	Children	10.7%	25%	21.4%	42.9%
	Teenagers	21.4%	42.9%	21.4%	14.3%
Writes in short sentences, without grammatical ties	Children	10.7%	21.4%	21.4%	46.4%
	Teenagers	28.6%	28.6%	14.3%	28.6%
Has trouble developing an answer or giving details when writing	Children	3.6%	25%	28.6%	42.9%
	Teenagers	-	7.1%	64.3%	28.6%
Has trouble ordering words correctly when writing sentences.	Children	10.7%	28.6%	25%	35.7%
	Teenagers	28.6%	42.9%	7.1%	21.4%