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Interventions in Specific Learning Disabilities Through Families

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1. Introduction

Specific learning disabilities (LD) are a heterogeneous group of disorders that are manifested through significant difficulties in verbal expression-comprehension, reading, writing and mathematical reasoning and ability, and presumably stem from a dysfunction of the central nervous system (Lerner & Kline, 2006). The internationally established diagnostic criteria specify a delay of at least two years and two standard deviations below the mean performance on the skill value against the normative reference group. They also establish the subject must have a normal intellectual capacity and not suffer any associated developmental disorders that could account for her/his limitations or difficulties. Lastly, the subject must also have received adequate and normal schooling (American Psychiatric Association, APA, 2002; National Joint Committee of Learning Disabilities - NJCLD 1997). However, while these conditions are essentially conceptual and define LD as intrinsic to the individual and with a biological-genetic basis, they can coexist with problems in self-regulatory behaviors, social perception and interaction. They can also exist together with other disabilities, such as sensory impairment, mental retardation, severe emotional disorders or with extrinsic factors such as cultural differences or inadequate schooling. These factors, while not the cause of the LD, can influence its course (Individuals with Disabilities Education Improvement Act - IDEA 2004. Public Law 108-446; NJCLD 1997).

If we focus on the latter perspective, which focuses on the environmental aspects, there is a proliferation of ecological models and, within them, it is common to find research tendencies that analyze the influence the specific people that make up the context for the pupil's development and difficulties (Jiménez & Rodríguez, 2008; Montiel, Montiel, & Peña, 2005; Pheula, Rohde, & Schmitz, 2011; Snowling, Muter, & Carroll, 2007; Shur-Fen, 2007). Current psychoeducational research is increasingly focusing on the contextual aspects of the factors that determine children's academic performance, studying the interrelation of the pupil's personal variables and those of her/his socioemotional context.

Several studies have focused on the mutual influence of the family of the child's difficulties. Some of the studies have pointed out that resilience and protection are a result of personal variables of the pupil and LD and the environment in which s/he develops, essentially the family. It is therefore to be expected that a family environment which provides emotional support, care and stimuli for the child with LD will promote her/his development, the opposite being true for disadvantaged environments (Alomar, 2006; Barkauskiene, 2009;

Bodovski & Youn, 2010; Dyson, 2010; Foley, 2011; Ghazarian & Buehler, 2010; Heiman, Zinck, & Heath, 2008; Marks 2006; Pérez, Ferri, Melià, & Miranda, 2007; Ruiz, 2001). Therefore, specific interventions aimed at promoting protecting factors and minimizing risk factors require identifying these prior to the intervention, contextually and in a wide sense. This enables a global intervention which fosters all the positive aspects and tries to reduce the negative ones.

Based on the above, the present research aims to offer a wide view of possible contextual interventions regarding LD in the home. In order to do so, we start by providing a detailed analysis of international research that has focused on the family as a means of improving the situation of children with LD. We analyze the main points of interest of these interventions, describing them in detail. We also analyze some procedures to stimulate families' collaboration in helping children with LD with their homework. Finally, we justify the need to work directly with parents, and suggest procedures or resources related to the development of programs for parents, support groups or associations that would be efficient in this respect.

2. General studies on LD and families

There is currently a dearth of scientific production addressing the family environment of children with LD. This is perhaps due to the atypical legal recognition of these problems (Dyson, 2010; Feagans, Merriwether, & Haldane, 1991). Most of the research focuses on the socioemotional context of pupils of the subgroup named Special Educational Needs (Hegarty, 2008). However, due to international interest in this area, and due to the legal recognition attained in Spain (LOE, 2006), there is an increasing production of studies in this area. Thus, when we use international databases specialized in social education we find that the terms learning disabilities, specific learning disabilities, dyslexia, dyscalculia, dysgraphia and together with terms referring to the family (parents, parental, family, home) produce studies with differing orientations. One focuses on the relationship between genetics and LD. Most of these studies confirm LDs are inherited, though they agree that their course can be determined by environmental variables. They point towards the influence of purely educational factors, such as the role of teachers, the teaching method or procedures followed, as well as family variables related to home provision of resources, parental level of education or the family's socioeconomic situation (Berninger, Abbott & Thompson, 2001; Lyytinen, Eklund, & Lyytinen, 2005; Monuteaux, Faraone, Herzig, Navsaria, & Biederman, 2005; Shalev, et al., 2001; Snowling, et al., 2007). The thesis that despite the LD being part of the individual there is a high influence of environmental aspects on its course and severity is further reinforced by these studies.

Another group of studies (some of which are summarized in Table 1) focus on analyzing and evaluating families' knowledge of LD, what they are, their origin, course, consequences, etc. They evaluate the impact of these disorders on family members as well as the functioning on the family microsystem. They also analyze the type of attention granted by relatives and the involvement, especially of parents, in education and their level of satisfaction with schools or teachers (Buswell, Norwich, & Burden, 2004; Espina, Fernández, & Pumar, 2001; Norwich, Griffiths, & Burden, 2005). There are also studies that focus either on the effects of LD on the family (acceptance, coping, stress) or on the consequences of family variables on LD (socioeconomic status, family atmosphere, parents' training, parents' perception of the child, etc.) (Antshel & Joseph, 2006; Strnadová, 2006).

<i>Objectives</i>	<i>Participants</i>	<i>Evaluation</i>	<i>Results</i>
Phillipson, 2010. Analyze relationship between parental factors, intellectual ability of students and their performance	780 families of students divided into high, middle and low cognitive abilities.	Students: Raven; scores in Math, ESL and English. Parents: Parents' attributions and perception questionnaire.	High-average group skills: parental factors mediate potential ability to predict performance; parents, more beliefs and expectations about children skills. For low ability students parental factors have a direct impact on performance.
Sabina, Sáez & Roméu (2010) analyze the existence of differences between two groups of students (with and without LD) in relation to risk factors dependent on themselves, school and family.	42 children with LD and 40 without LD, aged between 7 and 9 years	Parents-teacher interviews. Test of Perception of Family Functioning (FF-SIL). Indicator System for the Diagnosis of Social Disadvantaged Children. Non-participant observation	School and personal factors related to the presence of LD. Family Risk factors: low level of parent education, authoritarian educational styles, family dysfunction and alcoholism, violence, delinquency and marginality
Barkauskiene, 2009. Knowing patterns of parenting practices and of showing affection of parents of students with one or more LD	204 students, 8-11 years old; 102 LD.	Child behavior checklist. Involvement in child's learning scale. Feeling toward the child scale.	High parental control and negative affect in children with multiple LD as opposed to a single LD and without LD. Mothers of children without LD positive affect and home involvement.
Jordan & Levine (2009) Review work on the relationship between mathematics learning difficulties in students and their families' socioeconomic status.	Review empirical research.	Meta-analysis of research	Differences in math skills among children from families with low socioeconomic status compared to those whose families are middle or upper class. Socioeconomically disadvantaged students enter school with fewer skills, unfavorable beliefs towards mathematics and receive less support-help at home. Socially deprived families are unaware of LD and their treatment, few resources for dealing with them and do not work in coordination with teachers. Parents'

<i>Objectives</i>	<i>Participants</i>	<i>Evaluation</i>	<i>Results</i>
Heiman, Zinck, & Heath, 2008. Examine perceptions of parents and children of family relationships and communication.	104 families of students, 12-15 years old; 52 LD and 52 without LD.	Parents: Family assessment measures; Parent-adolescent communication scale.	socioeconomic status and lack of collaboration in teaching mathematics to children are risk factors for LD. Both parents perceive their children over-or under-involved with them and identify the same communication problems. Students identify bigger problems with maternal involvement than recognized by them. Students perceive less openness and more communication problems than parents.
Murray & Greenberg, 2006. To examine children's perceptions of their relationships with parents, teachers, peers and social, behavioral and emotional development.	96 Primary students with LD, borderline, or with emotional-behavioral problems.	Students: People in my life; Social Competence Scale for Children; Reynolds Child Depression scale; Delinquency rating scale of self and others; Seattle Personality Questionnaire for Children;	Relationships with parents, teachers, peers, associated with social, behavioral and emotional adjustment of students with LD. Communication with parents associated with lower crime.
Guoliang, Zhang, & Yan, 2005. Explore characteristics and relations between loneliness, acceptance and family functioning in children with and without LD.	34 students with LD, 64 students without LD, enrolled in 4th-6th year of Primary and their families.	Loneliness and Social Dissatisfaction Scale. Peer Nomination Inventory. McMaster Family Functioning Model Scale. Raven.	Positive correlation between peer acceptance and family functioning. Lack of relation between family functioning and loneliness.
Trainor, 2005. Examine perceptions of self-determination for students with LD during transition and students' perceptions of parents' and teachers' influence.	15 students with LD (16-19 years old) divided into: Afro-American, Europeans and Hispanic	Analysis of students' documents (individual transition plan), observations, focus groups and individual interviews.	Students feel that their self-determination efforts are thwarted at school and have more opportunities at home when they are supported by parents .

<i>Objectives</i>	<i>Participants</i>	<i>Evaluation</i>	<i>Results</i>
Domínguez y Pérez, 2003. Determinar funcionamiento de familias de niños con DEA, su afrontamiento de dificultad y del ingreso en educación especial.	43 familias de alumnos de primaria con trastornos del aprendizaje.	Prueba de evaluación de las relaciones intrafamiliares (FF-SIL). Cuestionario de afrontamiento familiar.	Funcionamiento familiar inadecuado en niños con DEA. Estilo afrontamiento más utilizado fue el centrado en el problema.

Table 1. Empirical research about family and LD.

Finally, we have located a third group of studies, which based on the results of the above, address specific interventions in the family context for pupils with LD from different perspectives. It is precisely this set of studies that are the subject analysis of the present work.

3. LD interventions in the family context

Naturalist approaches consider the ideal to be to support the student through all his/her surrounding formal and informal educational agents. This is especially important if s/he presents problems in learning and requires specific personal measures and materials (Gortmaker, Daly, McCurdy, Persampieri, & Hergenrader, 2007; Polloway, Bursuck, & Epstein, 2001). Also, regarding treatment, it is important to start intervention as soon as possible in order to guarantee higher efficacy. Based on all this, we can posit the family context as the optimal space for work in this area.

Families have a great potential to help students, as well as being capable of increasing learning environments and opportunities. They can also offer children individualized attention and make immediate modifications when the child requires it. Despite all this, parents are often not aware of how to play these aspects to their advantage. They often lack the strategic knowledge needed to help their children with academic tasks, even though with adequate support, they can be very effective intervention agents (Persampieri, Gortmaker, Daly, Sheridan, & McCurdy, 2006), which makes work with families highly commendable. There are two branches of intervention in LD using the family. The first focuses on getting the families to help in consolidating specific knowledge and/or to continue teachers' work at home. The second branch focuses on improving family interactions and helping parents naturally stimulate the development of the child's area of difficulty at home. Both branches can be used at the same time and are often enriched through family training activities. In spite of this, there is not yet a systematic and organized approach to collaboration with families in the current support model for LD. This model is still not very specific or developed in most Spanish regions. Another factor is that specialists in LD do not have much time to work with the children, since they travel between different schools. There are, therefore, time and space constraints that hinder the development of collaboration with the family.

There are empirical experiences at the international level that have led to the development of specific intervention methods through homework with families of children with LD. These can be used as a guide to teachers' professional practice with these kinds of children. The following section focuses on this area.

3.1 Empirical experiences of interventions on LD in the home

The inclusive perspective on intervention on LD considers family-professional collaboration to be a crucial element. Contextual activities for children with whichever LD in the real contexts in which they take place are one of the alternative treatments that are recommended.

For example, if we take language learning disabilities we must consider that the problems in this area are often related to phonological awareness and can be seen in the use of language in everyday situations. There are learning interventions designed to stimulate early spoken language for classroom use. However, general group interventions might not have the desired effects on children with LDL, for whom interventions based on real communication context are more efficient. It is because of this that the family is an optimal locus for treatment, as, in some regards, it allows for intervention in spontaneous events and communication situations arising from daily routines, as some practical work has shown.

In 2003 Quintana carried out a study which aimed to understand each child's educational needs by studying the contexts for its development and seek to address them through family-school collaboration. Two families with children with LDL collaborated. The work carried out was based on the experience of skills and experiences of both the families and the school. At the initial meeting between the teachers and the parents the study group presented the intervention program. An evaluation process was then carried out with the aim of getting to know the family members' view of the child's difficulties, her/his level of effort and interests, the treatments or measures already carried out and his/her level of functionality. Objectives and changes were then agreed upon. In summary, the program took the family's opinions on what the areas of difficulty were as a starting point, including family functioning, and used this to define goals. After this, they started the specific treatment for each child. It included strategies and/or activities such as modeling to correct pronunciation mistakes, creating game situations to increase opportunities for communication, how to use didactic materials, the use of words, tempo, voice, tone, etc. The results of this work were very positive, both for the children themselves and for their families. The children enhanced their social relationships and their interest in communication. Families improved their daily routines by increasing communication situations or joint activities. Due to the intervention families were the protagonists of these changes, which increased their self-esteem and allowed the changes to become more permanent. The parents' interest in the child's disability increased and so did their consciousness of it. Parents' anxiety was also reduced by sharing their worries with experts, who also offered them information on LDL. The relationship with the school was also enhanced.

Justice, Kaderavek, Bowles and Grimm (2005), also conducted a study to determine the effectiveness of a phonological awareness intervention program implemented by parents at home that was aimed at improving language development in twenty-five 5 year old

children with LD-L. To this end, instructors went to the family homes and verbally explained to parents the intervention's objectives as well as the procedure for carrying it out. They then performed a modeling activity in which the researcher taught the family how to carry out each task. Next, parents practiced the tasks with the researcher. This meant they were offered the feedback necessary to make sure they got it completely right. The parents' job was to read different stories with their children and then perform various phonological awareness activities (rhyme, similar sounds, phonics etc.). After a period of ten weeks reading the stories provided by the researchers and working with the proposed activities there was a noticeable improvement in the children's phonological awareness. There was a relationship between the improvements observed and the age of the children, with the eldest being those who benefited most from experience. Parents were satisfied with the experience, noting that they enjoyed it and all of them carried out the treatment in full.

We can conclude that in the specific case of LDL, intervention in everyday contexts and including the children's attachment figures is very positive, as it allows carrying out specific actions in a very personalized way and in everyday communicative situations. It is not a great effort for parents but is extremely beneficial to children.

Let us now look at reading. Parental involvement in its teaching can have positive effects on children, especially due to the fact that it requires continuous follow up, which means that during the summer period there tends to be a decrease in the achievements reached during the year. One way of reducing the negative effects of the summer holidays on children with specific reading disabilities (LD-R) is to use parents and to help them to implement stimulating interventions at home (Gotmaker, Daly, McCurdy, Persampieri, & Hergenrader, 2007). Having parents as tutors increases, among other things, reading fluency, though they must have specific tools, strategies and techniques to encourage them to help their children with this skill.

Persamperi et al (2006) carried out a study whose object was to increase reading fluency of LD-R pupils through parents' implementation of a specific program. It was carried out on children aged 8-9 over the summer holidays and based on narrative or essay texts. Parents received training 3-5 days a week, for 10 to 15 minutes. It was based on the following steps: a) the professional described the goals and the specific procedure b) s/he acted as a model, carrying out an example with the child, while the parents watched, c) the parent carried out the activity with the child and the expert offered feedback and tutoring until the parent could carry out the teaching procedure flawlessly. Parents were also handed a written protocol for the intervention. The tasks were to correct mistakes through sentence repetition and contingencies of rewards in order to improve. The child was required to read the passage while the parent wrote down the mistakes. The parents then modeled correct delivery and asked the child to read the word and full sentence again, which reinforced the steps the child carried out correctly. The study's results show that these types of tasks enabled children to improve their reading fluency over the important summer months and that these improvements were stable over time. Parents' ability and potential to intervene from home was therefore verified.

Based on the same perspective, Gortmaker, et al. (2007) carried out a program to increase reading fluency of high and low frequency words in three students aged 9 with LD-R through parental collaboration. As in the previous case, there were three steps in parent

training: 1) Oral explanation of the program, including its different aspects and solving any initial questions 2) Expert acted as a model acting out the tasks with the child with the parent present 3) The parent carried out the procedure with the child while the expert corrected and gave feedback until it was carried out perfectly. This was accompanied by a written protocol for parents to keep. The intervention was based on parents and children reading stories together 10-15 minutes a day, 3-5 days a week for a month. While the child read, the parent corrected any mistakes. S/he would repeat the mispronounced syllables, words or sentences and thereby making their reading automatic. Results once again showed an increase in reading fluency and both children and parents were satisfied with the results of the treatment.

Based on this evidence we can confirm that parents can be an effective alternative to address some of the problems typical of children with LD-R, but in many other cases their collaboration is sought to prevent the occurrence of these problems. Thus, a study by Van Otterloo, Van der Leij and Veldkamp (2006) tried to establish parents' potential to develop prereading skills related to phonological awareness of 32 children at risk of genetic dyslexia enrolled in second year of kindergarten. The first step was an initial meeting with parents to present the protocol and the exercises, which were demonstrated and discussed. Parents were given a week to study the protocol, after which researchers phoned them to solve any doubts that may have arisen. Parents then started working with their children. This consisted of pronouncing sounds and the working with grapheme-phoneme relationship through rhymes and games for 10 minutes a day over 14 weeks. Once the treatment was finished it was established that a high number of families had completed all the sessions. The quality of implementation was likewise high, though the results obtained were more influenced by the quantitative than the qualitative aspect. Carrying out all the sessions was more important than doing them perfectly. We can therefore conclude that even if parents are not experts it is sometimes sufficient for them to show interest in the program and carry it out with acceptable quality in order to achieve highly satisfactory effects. However, we must try, whenever possible, to reach the highest quality, as there are other intervening factors, such as parents' level of education. In this study it was found that the children whose parents had reached higher education gained better prereading skills. However, this can be due to the general stimulation the home offered and the family's linguistic capital. Therefore, it is necessary in family interventions for experts to carry out an ongoing monitoring of families. Parents are not experts and have very different and peculiar characteristics that may mediate the results. Programs must thus be tailored to parents' needs by providing more support to those families who, due to their characteristics, need it the most.

Feiler (2003) elaborated on the aspect of connecting naturally stimulating environments in the home with an improvement in children's performance after the implementation of specific treatments. Feiler (2003) analyzed the viability of a model of intervention based on home visits to children at risk of literacy LD in order to prevent them by giving parents guidelines. Over the first year of schooling, experts visited families on a weekly basis teaching parents basic reading and writing activities, such as reading books, helping the child write his/her name, and offering them materials or instructions. The results of this seemingly simple intervention were evidenced at the end of the school year. At the beginning of the year children in the experimental group learnt these skills at a significantly

slower pace than their classmates. However, at the end of the school year there were no significant differences. Families were also satisfied with their work and showed a high degree of interest in continuing with the activities they had learnt as well as with becoming more involved in their child's education.

Lastly, there is a study on the role of the family on writing LD (Jones & Christensen, 1999). It tested how effective a program aimed at improving the writing skills of children with mechanical difficulties was. The program could be carried out by family or faculty. Over 8 weeks and for ten minutes a day the relatives who volunteered worked with their children on activities regarding letter's shapes, correcting motor mistakes and fluid writing. Children improved both their motor writing and the quality of their stories. It was also shown that they did so regardless of whether it was the teachers or the family that carried out the tasks. Once more, there is evidence of parents' potential to stimulate the academic development of children with LD.

3.2 Family help with homework for children with LD

Most of the work which addresses family collaboration to prevent or solve LD focuses on language, reading and reading-writing and on young children at risk of LD. However, when the children with LD are older they usually present, apart from the diagnosed difficulties, difficulties with doing their homework. In some cases they get professional help from their schools. They, nevertheless, lack that professional support with their homework at home, which means that help from relatives is basic (Bryan, Burstein, & Bryan, 2001).

Some of the variables related to the problems with homework that students with LD present seem to be related to the lack of communication and coherence between the goals of the school and the family (Polloway, Bursuck, & Epstein, 2001). That means that in these cases direct contact between faculty and the family is essential to ensuring meeting and maintaining academic goals. In order for intervention programs to be really effective it is necessary for professionals to develop strategies to obtain parents' active collaboration, in addition to meeting with the child. It is also advisable that the family's involvement begin as early as possible. The perspective should be one of prevention, helping to avoid an increase in the disability. Parental satisfaction with the school means they will continue their favorable disposition towards collaboration. However, it is common for teachers to wait until the situation is out of control to ask for parents' collaboration. Likewise, there are but few parents who contact schools of their own accord to show interest in collaborating. This is sometimes due to time constraints, or to their being dissatisfaction with the school after finding that their child has problems that the school has not provided tools for overcoming. Teachers must therefore offer families as many options for collaboration as possible. This means that apart from defining schedules, times and spaces for homework, families can work on other specific aspects with their children with LD and keep frequent and fluid contact with the faculty.

It has been demonstrated that teaching parents how to work with their children on psychological variables that can influence their homework production pupils improve not just the quantity of homework produced, but also its quality, and even leading to higher exam marks. This means that if we provide families with the materials, procedures and concepts to participate in a systematic and structured way in the child's homework by

providing them organizational, self regulation or applied structures there will be clear benefits to the children's performance. We must, nevertheless, take into account that parents of children with LD report they have more problems than usual doing their homework and require more dedication. We must take the family's characteristics into account – number of children, profession and even the effects of involvement – which all affect its collaboration. This means taking its structural and functional traits into account in order to adapt the collaboration required to its real capacity, especially regarding children with LD, who may live in a highly stressful environment and whose parents may also suffer LD. In the next section we explore procedures, guidelines and resources that can guide direct work with families of pupils with LD.

4. The family as the locus of intervention: Support resources

The families of children with LD increase their degree of involvement if they perceive their help to be efficient, due to the big effort required to help their children, especially if they have other family members or work to take care of. It is therefore very important to give parents tools to ensure their actions will be effective and thus avoid them becoming frustrated and not collaborating further. Making them aware of how important their help is and of the positive effects of their collaboration, through their own evidence, is crucial. When starting to work with families of children with LD we should follow some guidelines.

First of all, it is very important that teachers address family crises in order to count with their collaboration. A common stress factor for families is their children's difficulties at school, so it is this institution that can best address them. Promoting parents' involvement is also considered a quality trademark for teachers (Tungland, 2002). However, it is important to consider the barriers to parents' collaboration and their possible solutions. Table 2 shows some of them.

Barriers that limit parent cooperation	Solving Strategies for Professionals
Language shortcomings	Use appropriate communication skills and effective and understandable language.
Work problems or time constraints.	Provide flexible schedules and locations to work with the professional.
Low self-awareness of one's skills.	Identify parents' skills and make them aware of them. Introduce parents to ways to help children
Negative school experiences, feelings of inferiority in relation to teachers, minimizing the importance of education.	Treatment of professionals and families as equals. Recognizing parent's educational potential and their responsibility. Avoid negative attitudes regarding family collaboration. Set goals together
Not understanding LD or denying them.	Specific interventions, parent support groups, associations.

Table 2. Family elements that limit their involvement in the education of children with LD and strategies to overcome them (adapted from Tungland, 2002).

When parents don't recognize their children's LD it might be due to them not knowing what these disorders are and therefore not addressing them. Karende, Mehta and Kulkarni (2007) confirmed this during their diagnostic procedures of LD for children. They then ran a specific session to train parents on LD. They asked parents a set of questions on what a learning disorder is, its causes, course, treatments, etc. These issues were debated for about 45 minutes and they were made aware of the correct answers. This allowed them to verify that their children had a real problem that required intervention. After this session parents became aware of LD and the need to treat them specifically, which required their collaboration. The results therefore proved to be very satisfactory.

In the 80s Stoll (1985) detected that families' lack of understanding of the diagnosis of LD was a factor contributing to the low relationship between parental expectations and children's potential, and therefore a low probability of acceptance of treatment. Therefore, he decided to carry out a seminar for families aimed at raising their awareness, which was expected to lead them to not resist the diagnosis and offer their children the help they really required. The starting hypothesis was that knowledge of the problem and its treatment would help decrease parental anxiety and increase their receptiveness. The seminar consisted of a week of 90 minute sessions both parents needed to attend, which addressed the following topics: definition of LD, family life, school life and future prospects. The sessions initially presented a general framework and progressively worked their way to each particular case. The facilitator asked questions parents had to answer. The answers were then fed back into the group and opened a debate. As the seminar progressed individual cases were addressed with the goal of decreasing stress through a cognitive understanding of reality which aimed to identify problems to then solve them. The results of the seminar met all the goals, increasing parents' awareness of the problem, helping them express it and understand it. It also helped them adapt their expectations regarding their children and increase parental collaboration.

Rolfesen and Martínez (2008) also carried out family training. They developed a psychoeducational program which aimed to guide parents of children with LD on how to use the resources available in their environment to prevent more serious difficulties. The participants were 8 parents of primary school children with LD. The program was 6 sessions long, which covered topics such as organization of family routines, support with children's homework, relationship between the family and the school, enriching everyday experiences, communication and family relationships and educational practices. The sessions, which were 90 minutes long and took place at the school, aimed to inform parents of assertive behaviors that favored children's adaptive behaviors and their school progress. The program addressed parents' needs. They showed a lot of interest in the content and raised their expectations regarding their ability to help their children together with the school.

Apart from these kinds of interventions there are other procedures which aim to help parents of children with LD, such as support groups, which can help families deal with the child's difficulties.

4.1 Family support groups

In Spain it is still unusual to find support groups for parents of children with LD, despite them being popular in the US and in other European countries, such as the UK. In the UK

we find the British Dyslexia Association, which has regional support groups created by parents for parents of children with LD. The general goal of the groups is to offer families social support through meetings, practical information and by addressing the needs of their members. They seek to exchange emotions, offer courses for families to learn how to help their children with homework or activities to improve relationships among siblings. They also have hotlines, rules for becoming a member, resources, etc.

The presence of different initiatives at the international level allows us to know and analyze their functioning and efficiency, as well as their limitations. An analysis (Bull, 2003) has shown that relatives who attend activities have different motivations for doing so, depending on their personal circumstances. We must take into account these interests before starting an association. For example, parents may go to support groups soon after diagnosis in search of information on LD or to find educational treatments they can carry out at home. They may also need to find effective support to help diminish the stress caused by their child's disability. Other relatives go to parents' groups after being referred by a professional or just to talk to other people who are in the same situation. Initial motivations are very important because they determine parents' satisfaction with the support group and, therefore, influence their functioning and proliferation. When starting up these groups it is important to consider members' characteristics and propose diversified, systematic, well organized and structured activities that address the needs of all of them (Bull, 2003).

4.2 Associations

In Spain there is a low level of awareness of LD – diagnostic criteria, different typologies and specific needs. Due to this, despite significant progress in terms of the law and the number of associations, the services offered are significantly more limited than those available to students with special needs and their families, due to these being much more conceptualized. The number of Spanish federations and local associations on development disorders far exceed those focused on LD, which shows a delay in this area. The number of associations in this area is, however, increasing, as can be seen in the following table on LD associations in Spain.

These associations often use dyslexia in their title though, according to their own descriptions, they offer services to all children and adults suffering from any type of learning disability and are not restricted to people with reading difficulties. Most of these associations have been created and financed by parents of children with LD, sometimes together with professionals. Their goal is an activist one, as they do not agree with how the Spanish education system is treating LD. On 15th July 2006 the Spanish Federation for Dyslexia and other Specific Learning Disabilities was created in order to join forces so as to better face different levels of government and allow each association to be more effective. Its main objectives are: a) Raise society's awareness of Learning Disabilities, how they can be prevented and how to solve the problems associated with them; how LD are one of the causes of school failure; b) Bring Educational Institutions' attention to what the real situation is, enabling them to offer adequate measures, both in regards to how the real education system addresses specific children's needs as well as the training received by teachers and professionals and the quality of help provided to families; c) Find and publicize the latest research, promote research and funding for research lines and the development of treatments for these disorders.

ASSOCIATION NAME
Nationwide
Spanish Federation of Dyslexia and Other Specific Learning Problems (Federación española de dislexia y otra dificultades específicas de aprendizaje, FEDIS)
Dyslexia without Barriers (Dislexia sin Barreras)
National Association for Learning Disabilities and their Rehabilitation (Asociación Nacional para las Deficiencias de Aprendizaje y su Rehabilitación, ANDAR)
Spanish Association for Special Education (Asociación Española de la Educación Especial, AEDES)
Learning Disorders Specialist Unit Sant Joan de Deu Hospital (Unidad especializada en trastornos de aprendizaje Hospital Sant Joan de Deu, UTAE)
Dyslexia and the Family Association (DISFAM) Asociación dislexia y familia (DISFAM)
Regional
Canary Islands Dyslexia and other Learning Disabilities (Dislexia Canarias y otras dificultades de aprendizaje, DISLECAN)
Catalan Association for Dyslexia and other Specific Difficulties (Asociación catalana de dislexia y otras dificultades específicas, ACD)
Dyslexic Association Murcia (Asociación disléxicos de Murcia, ADIXMUR)
Valencian Association for Dyslexia and other Learning Disabilities (Asociación Valenciana para la Dislexia y otros problemas de aprendizaje, AVADIS)
Galician Association for Education, Development and Diversity (Asociación Gallega de Educación, Desarrollo y Diversidad, AGAED)
BROT Educational Foundation (Fundación pedagógica el BROT).
Association for Dyslexia and Learning Problems of Asturias (Asociación para la dislexia y problemas de aprendizaje de Asturias, ADISPA)
Cantabrian Dyslexia Association (Asociación Cántabra de dislexia, ACANDIS)
Association for Children with Dyslexia and other Learning Disabilities of Reus (Asociación de niños disléxicos y otras dificultades de Aprendizaje de Reus)
Galician Dyslexia Association (Asociación gallega de Dislexia, AGADIS).
Positive Dyslexia Andalusian Association (Asociación Andaluza Dislexia en Positivo, ASANDIS)
Dyslexia Association Biscay (Asociación Dislexia Bizkaia, DISLEBI)
Jaen Dyslexia and other Learning Disabilities Association (Asociación Dislexia Jaén y otras Dificultades de Aprendizaje, ASDIJA)
Overcoming Dyslexia (Superar la dislexia)

Table 3. Regional and nationwide Spanish LD associations.

The associations are generally aimed at an audience of families and people affected, and not so much at professionals. Among the services offered, most of them have webpages that offer information. Their content is usually very similar – articles and other materials,

forums, contact numbers, FAQs, etc. Some of them, usually the associations aimed at or related to psychology or educational psychology professionals, which generally have an evaluation function, offer diagnosis. Other services they offer are stimulation and leisure activities, treatment and guidelines, counseling and information for families. Most of them also offer information, courses and seminars for professionals who work with these pupils.

Among the materials offered we would like to point out information on the disorders, how the family can face them, recommended treatment for the school and on the current legislation around the matter. They also often present screening protocols, guidelines for assessment, psychometric tests or intervention programs, treatment strategies and techniques, and practical proposals.

To sum up, the development of Spanish LD associations is underway but still insufficient. However, there is another type of association, which is private and generally works at the national level, which has been founded and run by professionals from different areas whose aim is therapeutic and to offer guidance. They are focused both on treatment and family and teacher guidance.

5. Conclusions

This chapter has addressed intervention with pupils with specific LD from a contextual point of view, based on the inclusion of the family as a focal point of development. We started by analyzing the studies which focused on the family and found it to be ideal for specific interventions. We then went on to describe empirical experiences in which parents were responsible for the application of specific intervention measures with children with LD. These were both remedial-preventive as well of collaboration with school tasks including homework.

The results of the studies reviewed support the need for a comprehensive assessment and intervention for students with LD (Gortmaker, et al., 2007; Polloway, et al., 2001). Intervention with the students themselves and treating their problems is necessary, but it is also necessary to take their family into consideration. Parents of students with LD need help to educate their children and to deal with their problems, but their own needs also require attention (Dyson, 2010; Karende, Mehta, & Kulkarni; 2007; Rolfsen & Martínez, 2008). Due to this, we finished by looking at the need to work directly with parents. We offered suggestions on activities, procedures for them to help their children effectively, such as parents' programs, support groups and associations. We have presented this with a focus on general guidelines which can help professionals actively work with and through the family. The empirical practices revised have shown parents to be effective for working with LD students. Therefore, intervention with and through families in the case of learning disabilities is well-established as necessary. We, thus, intend to continue this line of work and research to improve the situation of children with LD and their families.

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