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Perceptions of the situation of families with children with learning disabilities and ADHD

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Abstract

The goal of this study was to determine if there were any differences in dynamic family variables, home climate, parents' attitudes towards their children and parental involvement in education, in relation to the students' typological characteristics. The sample consisted of 87 families of pupils (fourth year primary-first year secondary). The families were divided into three groups according to the children's typology: with learning disabilities (LD), with attention deficit hyperactivity disorder (ADHD), or normal achievement (NA). In all cases, both students and parents filled out the "Opiniones familiares: FAOP" (Robledo & García, 2007). The results indicated higher levels of conflict, greater parental involvement in education and more parental rejection towards children with ADHD. Parents of pupils with LD received lower scores than parents of NA children in terms of perception of efficacy in writing instruction and in overall cooperation in teaching writing skills. Lastly, families of NA children showed more favorable patterns regarding their overall development, by offering a greater variety of cultural, intellectual and leisure activities compared with the other two groups of families.

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In recent decades, there has been a proliferation of empirical studies on the influence of the family on the educational development of children; some of these studies have analyzed the effects of household dynamic variables on student learning (Xia, 2010). Results show that family-home climate, parents' attitudes towards their children and parental involvement in education (Barkauskiene, 2009; Bodovski & Youn, 2010; Ghazarian & Buehler, 2010; Khan, Haynes, Armstrong, & Ronher, 2010; Phillipson, 2010; Powell, Son, File, & San Juan, 2010; Regner, Loose, & Dumas, 2009) are factors affecting the academic development of the vast majority of children. This influence is even more marked for pupils with complex problems that can affect their ability to learn, such as specific learning disabilities (hereafter LD) or attention deficit disorder with/without hyperactivity (ADHD). Such pupils usually have special educational needs which require specific attention in all microenvironments in which education takes place, including the family (Shur-Fen Gau, 2007; Snowling, Muter, & Carroll, 2007). However, most research has examined visibly disabled (intellectually, sensorally or physically) children´s family variables, yielding conflicting results in terms of the effects of the children´s condition on their families (Dyson, 2010). Thus, the question remains whether similar effects would be found for less visible disabilities such as LD or ADHD. In Spain, both LD and ADHD have only relatively recently been recognized in the educational sphere, and more specifically, since 2006, following the enactment of the Organic Law of Education. In accordance with this law, these pupils are now included among those identified as having special educational needs, and it is mandatory to offer them and their families adequate treatment for their difficulties. Therefore, there is increasing interest in gaining a precise understanding of all the aspects that influence the course of these disorders, including contextual and family related elements, which is why this study focused specifically on comparing these two types of difficulties.

LD is a concept that encompasses a heterogeneous group of disorders that manifest themselves in significant difficulties in understanding, speaking, reading, writing, reasoning, and mathematical ability, are presumably of biological origin and are related to the functioning of the central nervous system (Kavale & Forness, 2000; Lerner & Kline, 2006).

As for ADHD, it is a neuropsychological disorder that is characterized by a persistent pattern of inattention and/or hyperactivity-impulsivity that affects the social, academic and/or work life areas of the person´s life (Frazier, Youngstrom , Glutting, & Watkins, 2007; Jakobson & Kikas, 2007).

Therefore, it is maintained that ADHD and LD are different disorders of biological genetic origin which are intrinsic to the individual. However, there has now been a shift in focus towards environmental variables, including the family, which it is claimed can enhance or minimize the negative effects of these difficulties and, therefore, must be thoroughly examined and taken into consideration (Pheula, Rohde, & Schmitz, 2011; Snowling et al. 2007; Shur-Fen Gau, 2007).

The ecological research available on learning and environmental conditions confirms the importance of an adequate family climate, as well as the existence of a satisfactory home environment for the child's appropriate development (Barkauskiene, 2009; Campbell & Verna, 2007; Ghazarian & Buehler, 2010; Khan et al., 2010). Specifically, studies suggest that pupils whose families help them and functionally interact with them use effective educational styles, and in families where there are few arguments and low levels of stress, children do better at school and learn more easily (Bodovski & Youn, 2010; Guoliang, Zhang, & Yan, 2005; Halawah, 2006; Heiman, Zinck, & Heath, 2008). However, in troubled or dysfunctional families, children receive less and poorer quality stimulation, and their academic development is therefore slower. These factors are also present in homes where there are children with LD or ADHD (Foley, 2011; Ghazarian & Buehler, 2010; Keown, & Woodward, 2002; Ryan, 2002; Sheppard, 2005). Normally, due to the demands these types of pupil present and the constant frustrations and conflicts that arise from their failure to achieve the set goals, a sense of stress flourishes in their households that impairs family functioning and the development of the individual with these disorders (Cussen, Sciberras, Ukoumunne, & Efron, 2012; Healey, Flory, Miller, & Halperin, 2011; O'Connor, McConkey, & Hartop, 2005; Strnadová, 2006; Theule, Wiener, Rogers, & Marton, 2011; Trainor, 2005). Thus, studies have shown that having a child with ADHD increases the probability of family dysfunction, disrupting the interpersonal relationship between parents, reducing parental effectiveness, complicating the parent-child relationship and increasing family stress levels (Gonzalez & Fornés, 2012). Meanwhile, in the specific case of LD, possibly because these are less well-known types of disorder and are usually diagnosed when the child has attained a certain level of education, the results are not conclusive as regards the issue of family climate. Some studies have even reported finding no differences on this dimension between households with children with LD and those with children without difficulties (Dyson, 2010; Heiman & Berger, 2008). Therefore, there is a need to conduct further studies in this area in order to identify clear patterns or trends in relation to the dimension of family climate in the case of students with LD or ADHD.

Other factors that influence children's learning and development are parents' attitudes and perceptions regarding them. Apparently, a positive attitude on the part of parents toward their children and family support increase pupils' confidence in their abilities and awaken the child's interest in satisfying and meeting parents' expectations (Campbell & Verna, 2007; En-Ling & Chin-Chun, 2011; Figuera, Daria, & Forner, 2003). However, in families where there are children with special educational needs, including pupils with LD and ADHD, parents' negative attitudes towards their children tend to predominate. In such families, there is usually less expression of feelings and emotions, and adults tend to provide negative feedback to their children on their behavior and ability, criticize them or underestimate their abilities, show pessimistic expectations about their academic future and show them less affection (Barkauskiene, 2009; Goldstein, Harvey, &

Friedman, 2007; Stoll, 2000). These behaviors may lead the child to forge a negative self-image, thereby damaging the development of her/his personality (Robledo, García, & Miranda, 2010; Sances, 2009; Taylor, Chadwick, Heptinstall, & Danckaerts, 1996).

Another important aspect of pupils' academic success is parental educational involvement, both in school and at home (Galindo & Sheldon, 2012; Phillipson, 2010; Powell et al., 2010). In this regard, it has been shown that parental involvement in education stimulates pupils' academic motivation, their commitment to school and their perception of competence, control and efficacy (González, Willems, & Doan, 2005; Mo & Singh, 2008; Urdan, Solek, & Schoenfelder, 2007). Thus, parental involvement promotes children's correct academic development in general and is therefore of special interest in the case of LD or ADHD. In this case, it appears that in principle, having a child with difficulties implies that parents actively engage in educating that child (Alomar, 2006; Joyce, 2005; Saucedo & Pérez, 2009; Smith & Adams, 2006; Stoll, 2000). Nevertheless, some evidence suggests that as children with special educational needs grow and their difficulties increase, parental cooperation begins to decline and family dissatisfaction with education professionals rises (Gershwin, Singer, & Draper, 2008; Seitsinger, Felner, Brand, & Burns, 2008; Spann, Kohler, & Soenksen, 2003). It seems that in the case of LD, families perceive difficulty in communicating with the school and school programs are ineffective, failing to meet the needs of children (Dyson, 2010). If family collaboration decreases, children may perceive a certain level of parental disinterest in school, which could contribute to reducing their motivation to learn, exacerbating their problems. However, once again, there is a need to continue analyzing these interactions in the specific case of children with LD and ADHD in order to obtain conclusive results.

As regards family involvement in education at home, there are some important controversies in research findings regarding the parents' provision of stimulating learning environments at home. While some studies found no difference between families of children with LD or ADHD and children with standard performance (Rogers, Wiener, Marton, & Tannock, 2009; Sánchez, García, Jara, & Cuartero, 2011), others have indicated that most households of pupils with problems focus on enhancing the personal growth of family members and provide more stimulation and support for academic tasks (Huston & Rosenkrantz, 2005; Robledo, García, & Díez, 2009). In the latter cases, however, some studies have indicated that helping children excessively on a daily basis can equate to high levels of parental protection (Tarleton & Ward, 2005), which, coupled with inadequate management of conflict with school issues, contributes to parents developing parental anxiety and dissatisfaction. This in turn affects parents' ability to interact sensitively regarding the demands of the child and can lead to the development of an intrusive and ineffective approach to educational collaboration (Hedor, Annerén, & Wikblad, 2002).

In this respect, it has been reported that the parents of children with ADHD show less self-efficacy in helping children and feel less welcome and supported by schools and teachers as regards collaboration, and perceive that they have less time and energy to

engage (Robledo & García, in press; Rogers et al., 2009). Consequently, it is necessary to study this aspect further, as the specific findings for LD and ADHD are not yet conclusive.

In summary, to date, the real impact of each family contextual factor, such as family-home climate, parents' attitudes towards their children or parents' involvement in education, on the academic performance of children with LD or ADHD remains unknown, and the results obtained in the specific cases of LD and ADHD are inconclusive (Hegarty, 2008; Heiman & Berger, 2008; Jordan & Levine, 2009). In addition, the existing studies present some limitations related to the samples, since some have only involved one parent or child, while others have used subjective assessment instruments (Antshel & Joseph, 2006; Murray & Greenberg, 2006; Smith & Adams, 2006; Trainor, 2005). Therefore, there is a need for new studies that overcome these limitations in order to shed light on such a seldom studied field as the relationship between the family and the development of pupils with LD or ADHD, especially in the Spanish context.

This justifies the conduct of new studies which identify stable patterns in relation to the influence of family variables on Spanish pupils' development, which was the purpose of this study.

The goal was to compare the family dynamic context, namely the home climate, parents' attitudes toward their children and parental involvement in education, among three distinct groups of families: families of children with LD, families of pupils with ADHD and families of children with normal academic performance (NA), in order to identify contextual and family situations that may constitute risk or protective factors in the case of children with ADHD or LD, and on the basis of this, to be able to undertake comprehensive intervention measures to address the treatment of these pupils in all their educational settings. We hypothesised that we would find differential patterns in the family variables studied when comparing the three groups of families, according to the children's typology.

Method

Participants

Participants consisted of 87 families of pupils in their fourth year of primary to first year of secondary education (mean age = 11.27). This sample was drawn from a larger sample of 610 families studied. For this selection, we started by looking at the smallest groups (ADHD, $n = 29$) and identified 29 cases of families of pupils with LD and 29 families of children with NA, taking several criteria regarding the characteristics of the children and their families into account in the selection process.

The first inter-sample balance criterion was pupils' intellectual capacity. We considered it necessary for all children in our sample to have an IQ within the normal range. In this case, it was confirmed that all pupils had an IQ of 80 or above (applied test Factor G, Cattell & Cattell, 2001).

The second pairing criterion was the school year, since this was a study which addressed issues related to learning, such as performance, and this factor is closely related to the educational year. This item had a total balance in the distribution of participants among experimental groups, as reflected by the absence of statistically significant differences between groups ($\chi^{2 =}$ .000, $p = 1$). In addition, consideration of the educational level enabled groups to be matched according to children's age ($\chi^{2 =}$ 19.989, $p = .530$).

As regards the family elements considered to ensure the maximum similarity among the groups, we verified that no statistically significant differences existed among groups for any of the factors analyzed, as evidenced by the Chi-square statistic: father's age ($\chi^2 =$ 45.981, $p = .238$), mother's age ($\chi^2 = 47.845$, $p = .131$) father's employment status ($\chi^2 =$ 5965, $p = .427$), mother's employment status ($\chi^2 = 2413$, $p = .660$), parents' marital status ($\chi^2 = 3105$, $p = .540$), number of people living in the home ($\chi^2 = 11586$, $p = .314$) and square meters of housing ($\chi^2 = 71.188$, $p = .251$). Table 1 shows a demographic comparison of the three participant groups, including students' and parents' characteristics.

Regarding the inclusion criteria for pupils in each sample group according to their types, several elements were taken into account. To identify pupils with LD, we used internationally established criteria (American Psychiatric Association (APA) 2003; National Joint Committee of Learning Disabilities (NJCLD), 1997). We first established the need for a diagnosis of a specific delay of at least two years and two standard deviations below the average yield from the normative age group and educational level. Therefore, we initially conducted systematic interviews with teachers, which allowed us to identify pupils who performed poorly in writing, since, as already noted, this study's area of interest essentially resided in learning disabilities related to writing.

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Similarly, we carried out a direct assessment of pupils' writing competence. Led by a researcher and in their own class groups, all the children completed an essay writing task with no set topic or length. The essays were then comprehensively corrected by experienced and highly qualified professionals specifically trained for this purpose, using the text correction protocol developed by the research team headed by J. N. García. Each pupil's results were matched with the scale of regulated scores produced by the researchers, thereby assigning each child a position on that scale. This allowed us to identify those pupils whose writing performance was two standard deviations below the mean expected, based on age and/or year.

Table 1

Demographic characteristics of children and parents from each group

Children				
Year	*Sex*	*NA* *(n = 29)*	*LD* *(n = 29)*	*ADHD* *(n = 29)*
4th Primary (age = 9-10)	Male	1	1	2
	Female	1	1	0
5th Primary (age = 10-11)	Male	5	6	9
	Female	6	5	2
6th Primary (age = 11-12)	Male	4	4	7
	Female	3	3	0
1st Secondary (age = 12-13)	Male	3	3	6
	Female	4	4	1
2nd Secondary (age = 13-14)	Male	2	2	2
	Female	0	0	0
Age	Mean	11.45	11.34	11.03
	Standard deviaton	1.24	1.11	1.61
Parents				
Characteristics	*Values*	*NA*	*LD*	*ADHD*
Father's age	Mean	44.44	44.48	44.71
	Standard deviation	5.994	4.483	5.255
Mother´s age	Mean	41.79	42.1	43.21
	Standard deviation	6.256	4.03	2.377

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Secondly, we required pupils with a standard IQ, so we asked all children to perform test Factor G (Catell & Catell, 2001), which provides an overall intelligence score and the possibility of a collective application.

In addition, for the diagnosis of learning disabilities, international standards also explicitly require the absence of any other developmental disorders which could explain the limitations associated with the field analyzed, and for the child to be receiving standardized and adequate schooling. Therefore, we also verified these aspects in our interviews with teachers, confirming that pupils with LD did not have any other documented developmental disorder and received proper schooling.

The assessment procedure for the identification of writing disabilities was applied to all the pupils sampled, which also allowed us to identify those children who made up the NA group. In this case, faculty interviews were also used to rule out types of learning disabilities (reading or math) in these children, thus confirming that their overall performance in different areas was normal. Moreover, the fact that these pupils were classmates of children with LD meant that both groups had received the same instruction in written composition.

The ADHD group was made up entirely of pupils with neurological and psychological clinical diagnoses, performed by multidisciplinary teams within the area of pediatric neurology at La Fe hospital (Valencia), Hospital de León (León) and the Universities of León and Valencia. However, to confirm the diagnosis we verified that all the children met the following criteria: i) clinical diagnosis of combined ADHD subtype according to the Diagnostic and Statistical Manual of Mental Disorders, fourth edition, revised (APA, 2003) and agreement between parents and teachers about the presence of at least six symptoms of inattention and at least six symptoms of hyperactivity/impulsivity; ii) the duration of symptoms exceeded a year, iii) the problem had appeared before age 7; iv) not suffering psychosis, neurological damage, epilepsy or sensory deficit. In addition, subjects' T scores were over sixty-three on scales of hyperactivity, inattention and total index of the Conners' test, in its parental (CPTRS-R: S) and teacher versions (CTRS-R: S) (Conners, 2001).

With respect to family participants, 57.7% were mothers and only 6.9% were fathers, although 33% of the cases involved both parents (in 2.4% of cases, the family participant did not indicate her/his relationship to the pupil). The average age of the father

figures was 44.5 years while that of the mother figures was 42.33 years. Regarding their education, in the case of families of children with NA, 10% of the parents had only received primary education, 56% secondary education and 33% of parents had studied at university. For families of pupils with LD, 32% of the families had received primary education, 64% secondary and 4% university education. Finally, for the parents of children with ADHD, these figures were 40% primary, 34% secondary and 26% university education.

Table 2
Description of the scales within FAOP

Scale	*Construct assessed*	*Dimensions*	*Number of items – response scale*	*Reliability*	*Example of items*
Family opinions: parental involvement in education (FAOP- IM)	Parental involvement in education (parents' and children's perception).	- Family involvement dimension: Family's motivation and support toward schooling. Collaboration and stimulation at home: stimulating behaviors and the promotion of learning environments within the home or at the family's initiative. - School involvement dimension: School-based collaboration, activities and behaviors of parents in school with children, professionals, other	Parents: 28 items. Children: 20 items Frequency response scale: 1 never-5 always	Parents' version: Cronbach's Alpha = .882 Children's version: Cronbach's Alpha = .885	Personally as a mother / father ... I review my child's homework. I take my child to the library. I suggest activities or trips to the teacher. I call the teacher if I'm worried about something my son has told me.

		families. Communication with school: contact between parents and teachers.			
Family opinions: writing practice (FAOP-PRAES)	Parental role in teaching and motivating written communication skills (parents' and children's perception).	- Reinforcement of motivation in practice: motivation to write by parents. - Efficacy in practice: parental ability to help in writing. - Psychological processes in practice: parental involvement in teaching writing by helping with homework and with mechanical and higher-order aspects. - Writing stimulation in practice: stimulation to write using everyday tasks, and specific models and materials.	Parents: 16 items. Children: 15 items Frequency response scale: 1 never-5 always	Parents' version: Cronbach's Alpha= .858 Children's version: Cronbach's Alpha= .874	In relation to writing... I encourage my child to practice writing at home. I think I'm able to help my child in writing tasks. I tell my child to consider the organization of ideas and the meaning of the text and try to correct the mistakes in this when I check their writing task. I carry out everyday writing tasks with my child, such as shopping lists, letters or e-mails to friends, notes on the refrigerator, Christmas cards ...
Family opinions: home (FAOP-HOME)	Provision of a household with characteristics conducive to learning: resources, enhancing autonomy and maturity, parenting styles,	- Encouraging Learning Materials: provision at home of stimulating materials and spaces for academic development. - Acceptance-love: acceptance, positive interactions and	Parents and children: 37 items. Frequency response scale: 1 never-5 always	Parents' version: Cronbach's Alpha = .751 Children's version: Cronbach's Alpha= .744	At home, there are books appropriate for my child. I speak to my son affectionately. I think my son is a nuisance. At home, everyone

	emotional control (parents' and children's perception).	positive management of the child's feelings and behaviors. - Rejection-hostility: Rejection, hostility, anger, bitterness, resentment or lack parental interest in their children. - Educational styles: permissive, authoritarian or democratic, used by parents to exert control over their children. - Encouraging children's self-reliance, maturity and responsibility.			participates in making family rules. I teach my son basic skills of cooking or cleaning.
Family opinions: climate (FAOP-FES)	Social and environmental characteristics of families (parents' and children's perception).	- Relationship Dimension: Cohesion, Expressiveness and Conflict - Personal Growth Dimension: Independence, Performance orientation, Cultural-intellectual orientation and Leisure-oriented activities. - System Maintenance dimension, stability: Organization and Control	Parents and children: 81 items. Response scale: true or false.	Parents' version: Cronbach's Alpha= .843 Children's version: Cronbach's Alpha= .807	Test FES (Moos & Moos, 1981)

Instruments

In order to assess how parents and children perceived the different dimensions of the family educational context, we used the parental (FAOP-PA, Robledo & Garcia, 2007) and the children's version of the Family Opinions Instrument (FAOP-HI, Robledo & Garcia, in press), and combined their results. This instrument has suitable psychometric properties as regards validity and reliability, with Cronbach's alphas of .921 for children and .929 for parents, and it includes different levels, as detailed in Table 2.

Procedure

We requested the cooperation and consent of the management teams of each school, and the teachers were informed of the purpose of the research and the nature of the help required from them. We asked them to answer questions in relation to the children in order to classify them according to our typology and discard various problematic situations. Similarly, they were required to help researchers carry out the evaluation sessions with pupils in which, after obtaining their families' informed consent, they underwent the relevant assessments. These assessments were carried out in groups over two sessions of one hour each. Expert staff administered the evaluation tests to students. This ensured fidelity in the execution of the study. Teachers also had to distribute the FAOP questionnaire to families, along with a letter explaining the study and requesting their participation and that of their children, and were responsible for subsequent collection. To ensure that parents actually filled in the scales and that they consented to their children's evaluation, they were explicitly asked to sign the questionnaire or deliver it in person. This was another procedure used to ensure fidelity in implementing the study.

Once the field work had been completed, we corrected the assessments and processed the results. We then selected the subsample employed in the statistical analysis, which was carried out using the Statistical Package for the Social Sciences (SPSS) version 17.0. The results are presented below.

Results

We used one factorial design, a 3×1, comparing the three groups of families for the different dependent variables. Multivariate contrasts indicated high and statistically significant results, with a very large effect size [F (48, 74) = 2.655, p <.001, η2 = .633]. Tests of inter-subject effects show statistically significant results, with effect sizes ranging from medium to large for the variables in Table 3.

Post hoc contrasts (Scheffe test) indicated statistically significant differences in the perceptions of families whose children have problems vis-à-vis families of NA pupils in recreation activities (p = .011). The parents of children with ADHD also differed from those of NA children in stimulation of writing (p = .011), rejection (p = .012), relationships (p = .034), personal growth (p = .041) and cultural-intellectual orientation (p = .033) and from those of children with LD in communication with the school (p = .049) and involvement in

school (p = .022). We observed the same in the case of positive conflict resolution (p = .005). Finally, families of children with LD also differed from those of the NA group in parental efficacy in writing instruction (p = .042). For more details, see Figure 1.

Table 3

Intersubject test significant results for group, design 3x1.

Scales	Variables	NA		LD		ADHD				
		Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	*F*	*P*	η^2
Family opinions: parental involvement in education (FAOP-IM).	Communica-tion school.	31.36	5.93	30.2	5.73	34.5	4.9	3.451	.038	.103
	Involvement school.	63.5	8.58	60.6	10.82	69.5	10.56	4.283	.018	.125
Family opinions: writing practice (FAOP-PRAES).	Efficacy in writing instruction.	37.1	4.32	33.1	5.12	34.62	5.66	3.446	.038	.103
	Stimulation writing.	25.64	3.52	23.55	3.63	22.3	3.07	5.017	.010	.143
Family opinions: home (FAOP-HOME).	Rejection.	31.8	6.24	34.2	7.65	38.6	7.56	4.894	.011	.140
Family opinions: climate (FAOP-FES).	Expressiveness.	11.9	2.28	10.1	2.72	10.05	2.59	3.666	.031	.109
	Conflict.	13	2.81	14.1	2.22	11.3	2.63	5.790	.005	.162
	Relationships.	40.9	6.57	38.8	6.40	35.8	5.86	3.622	.033	.108
	Cultural-intellectual.	13.2	2.56	12.25	3.02	10.71	3.69	3.646	.032	.108
	Recreation.	15	2.16	11.7	3.71	12.2	2.68	7.972	.001	.210
Total growth.	49.32	5.36	45	9.02	43.6	6.91	3.677	.031	.109	

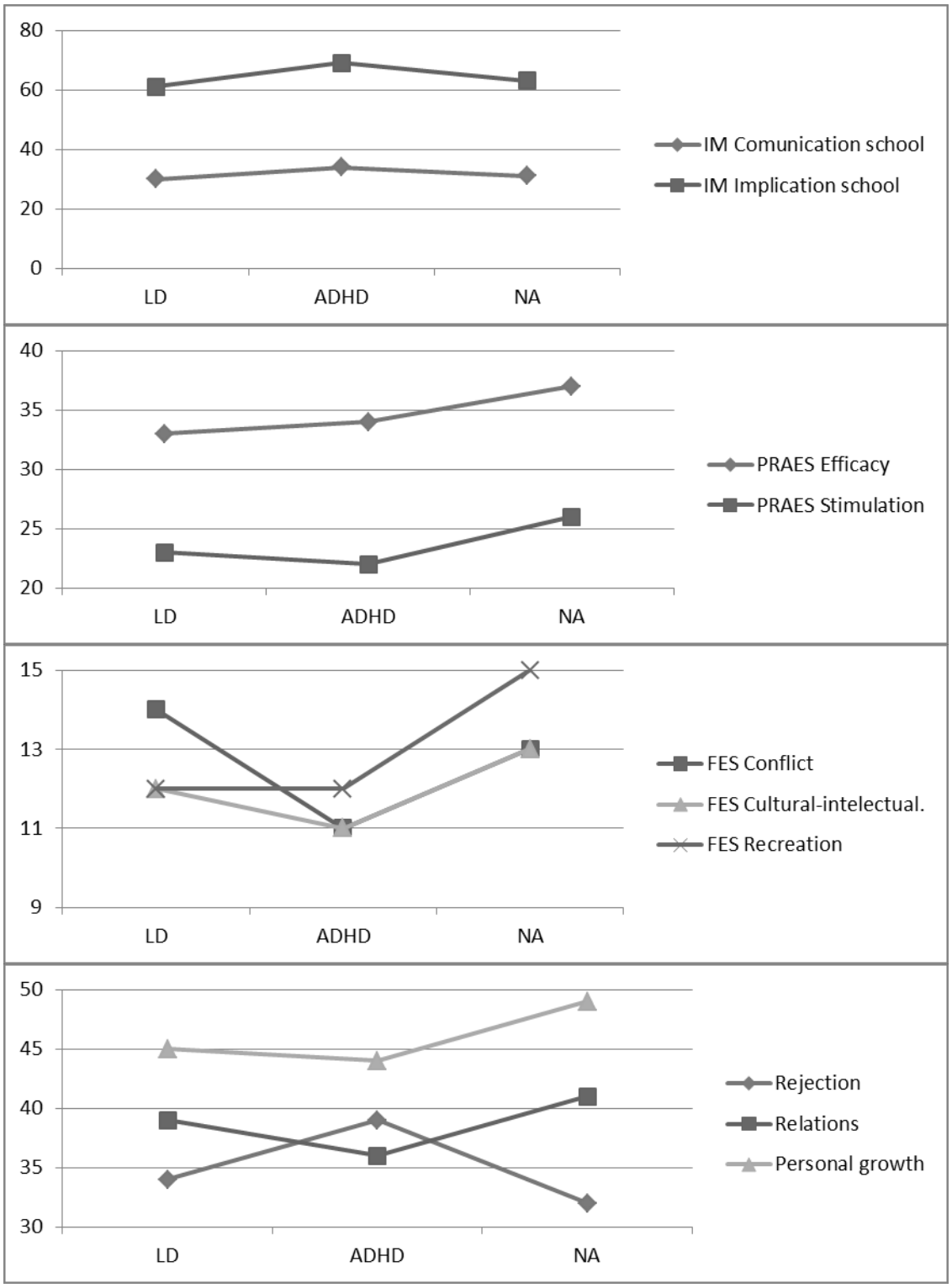

Figure 1. Perceptions of families by family dynamic variables, according to the type of pupils.

Discussion and Conclusions

Interest in LD and ADHD has been gradually shifting toward more holistic perspectives in terms of analysis and treatment, where not only the person is considered, but also all the social agents that surround her (Gortmaker, Daly, McCurdy, Persampieri, & Hergenrader, 2007; Mautone, Lefler, & Power, 2011; Polloway, Bursuck, & Epstein, 2001). However, despite progress in this area, there have been few results up to now, not allowing for definitive conclusions, especially as regards Spanish samples (Hegarty, 2008; Heiman & Berger, 2008; Xía, 2010). Therefore, there is a need to conduct further research in order to analyze all family dynamic variables in relation to the academic performance of children with ADHD or LD as a basis for offering alternative multi-component forms of intervention to promote these pupils' development.

The main objective of this research was to analyze possible differences in the dynamic family variables in relation to the characterization of pupils, by comparing three groups of families differentiated according to their children's typology. When we look at the family dimension and organize our data around the elements evaluated through the FAOP, parents' involvement in education, attitudes towards their children and family-home climate, we can draw several interesting conclusions.

Looking at the variables addressed through FAOP-IM (parents' involvement in education) we can conclude that parental involvement in education is greater in the case of families of children with ADHD (Robledo & García, in press; Saucedo & Pérez, 2009; Smith & Adams, 2006), even in comparison with families of children with LD. One possible explanation for this is that at the time this research was conducted, Spanish legislation still did not address the specific needs of pupils with LD. Therefore, the pupils studied received no specific support for their LD. This, together with the fact that LD is less apparent in outward behavior than ADHD and the problems only become apparent in writing when the pupil has already received fairly advanced schooling, may hinder parental diagnosis and explain the lack of continuous contact with the teachers (Bull, 2003; Karende, Mehta, & Kulkarni, 2007; Rolfsen & Martinez, 2008; Stoll, 2000). It is also important to recognize a specific limitation of this research—a certain bias in the selection of the sample. Participants were selected through intentional sampling, based on the voluntary cooperation of families. Also, in the case of families of children with ADHD, we identified them mainly through associations or groups of families, so parents were aware of the problem the child faced.

Looking at the results derived from FAOP-PRAES (parents' involvement in writing), we can conclude that the families of pupils with LD differ from families of NA children, in the negative direction, regarding parental perception of efficacy in writing instruction. The lower parental sense of efficacy in teaching writing in LD families may be explained by the fact that, because children in this group have disabilities in this area, the help they require from their parents is very specific and the latter may not feel able to provide it (Bloomfield, Kendall, & Fortuna, 2010; Kay & Fitzgerald, 1994). Families of

pupils with ADHD differ from families of NA children regarding stimulation of writing skills. In this case, the literature reviewed showed that one reason parents fail to cooperate on educational issues is their own lack of training in this respect, which is even more salient in the case of helping children who require a very high level of expertise (Karende et al., 2007; Persampieri, Gortmaker, Daly, Sheridan, & McCurdy, 2006). In addition, children with ADHD often have a wide range of needs, which may imply that communicative competence is not sufficiently valued and, therefore, although education in this skill is addressed, it may be done in a more superficial manner or in combination with support in many other areas.

Thus, a practical implication deriving from this result is the need to develop training programs for parents that would enable them to contribute to the education of children with ADHD.

Regarding the results obtained with FAOP-HOME (attitudes toward their children), we saw that parents of children with ADHD reported feeling more rejection toward their children than parents of the other two groups. These results are consistent with those obtained in other studies, which seem to have confirmed that parents of children with ADHD tend to be less affectionate with their children and often unconsciously subject them to the expression of negative emotions of rejection (Kaminski, Jones, & Harshaw, 2004; Presentación, Pinto, Meliá, & Miranda, 2009; Robledo et al., 2010, Shur-Fen Gau, 2007; Taylor et al., 1996). In addition to the children's own awareness of their problems, the emotional and behavioural development of children with ADHD is mediated by other external variables such as parental acceptance, recognized for its potential as a protective factor in reaction to the disorder itself, or family rejection, identified as a high predictor of externalizing problems (Lifford, Harold, & Thapar, 2008; Murris, Meesters, & Van der Berg, 2003; Shaw et al., 1998). Therefore, when designing a comprehensive treatment for children with ADHD, it is essential to consider these elements.

Analysis of FAOP-FES (home climate) variables led us to several conclusions. On the one hand, it confirmed that families of children with ADHD present a less adaptive relationship pattern that those of children with NA. But in addition, the results indicate higher levels of conflict in families of children with ADHD compared to families of children with LD, possibly due to the higher level of external expression of this disorder (Bao-Yu & Lin-Yan, 2004; Hoza et al., 2000; Miranda, Grau, Meliá, & Rosello, 2008; Montiel, Montiel, & Peña, 2005; Taylor et al., 1996; Wells et al., 2000). As for the overall growth dimension, one can conclude that the families of NA children show more favorable patterns regarding their overall development, by offering a variety of cultural and intellectual or leisure activities (Campbell & Verna, 2007; Huston & Rosenkrantz, 2005; Vera, Morales, & Vera, 2005). This can be explained by the fact that in families where children have no problems, parents are able to encourage such activities more often. However, in the case of children with LD or ADHD, it is possible that leisure time is used to focus on academic tasks or on trying to alleviate the problems arising from the disorder itself, as demonstrated in studies which have confirmed that performance-oriented activities

are prioritized in these households (Robledo et al., 2009; Stoll, 2000) and therefore the time spent and interest in leisure or other cultural activities is lower.

In short, this study confirms a trend indicating that contextual family elements show characteristics that are less favorable for learning and development in families in which children have ADHD or LD. However, these results are relative and the limitations of the study should be taken into account: limitations which will have to be overcome in order to be able to extrapolate the findings more accurately. Thus, sample size should be increased and perhaps even pupil typology broadened, to compare families of children with different problems, including children with traditional special educational needs or pupils with several overlapping difficulties. In addition, use should be made of evaluation instruments based, for example, on observation or recording behaviours in real situations, rather than relying exclusively on subjective self-report questionnaires. Nevertheless, it can be concluded that these family-contextual elements emerge as potential risk factors which should be monitored. Therefore, these variables require greater empirical attention in the immediate future, in order to provide comprehensive treatment optimized for these pupils and their families.

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