Ocnos (2016), 15: 7-21
DOI 10.18239/ocnos_2016.15.1.866

OCNOS
Revista de Estudios sobre Lectura

Ocnos
Revista de Estudios sobre lectura
http://ocnos.revista.uclm.es/

Open Access
Full Text
Article

Effects of Family Involvement with Students at Risk for Reading Disability

Efectos de la implicación familiar en estudiantes con riesgo de dificultad lectora

Juan Mora-Figueroa
Arturo Galán
Marta López-Jurado
Universidad Nacional de Educación a Distancia (UNED)

Received:
04/11/2015

Accepted:
02/03/2016

ISSN: 1885-446 X
ISSNe: 2254-9099

Keywords
Family Involvement; Program Evaluation; Learning Disabilities; Reading Instruction; Reading Achievement, Reading Difficulties.

Palabras clave
Implicación familiar; evaluación de programas; dificultades de aprendizaje; lectura; rendimiento lector.

Contact:
agalan@edu.uned.es

Abstract

Family environment strongly influences many aspects of education. A proportion of the school population that requires special attention are those students with a learning disability, especially those with reading problems, which make up the largest group of students with special educational needs. Through the family literacy program "Would you read me a story, please?", this study aims to ascertain whether the commitment of parents in the education of their children in reading is an effective means to improve their learning. For this, a quasi-experimental design with pretest-posttest control group was performed. There were 206 participants, students from 1st of Primary and their families enrolled in five schools. Family Involvement variable was assessed through a record of weekly monitoring completed by each family. The reading performance was assessed before and after program implementation. The results show significant differences on all subscales of reading performance between the group of students who participated in the program and those who did not follow, whether showing normal performance at the beginning of the investigation as if they had a possible reading disability. The number of students at risk of reading disability in the pretest is more reduced in the experimental group.

Resumen

El entorno familiar influye notablemente en numerosos aspectos educativos. Una parte de la población escolar que requiere atención especial son los alumnos que presentan Dificultades de Aprendizaje en la Lectura (DAL). A partir del programa de lectura en familia "¿Me lees un cuento, por favor?", se busca comprobar si la implicación de los padres en la lectura de sus hijos mejora su aprendizaje. Para ello se realizó un diseño cuasi-experimental pretest-postest con grupo de control. Los participantes fueron 206 alumnos de 1º de Educación Primaria escolarizados en cinco colegios y sus familias. La variable Implicación Familiar se valoró a través de las hojas de registro semanal que rellenaban las familias para documentar cómo era su seguimiento del programa. El Rendimiento Lector (RL) se evaluó antes y después del programa mediante la batería de lectura PROLEC-R. Los resultados de todas las escalas del RL muestran diferencias significativas entre los grupos que participaron en el programa y los que no lo hicieron, tanto si mostraban un RL normal al inicio de la investigación como si presentaban una posible Dificultad de Aprendizaje en la Lectura. El número de alumnos en riesgo de sufrir una DAL al finalizar el programa se reduce más en el grupo experimental

Mora-Figueroa, J., Galán, A., & López-Jurado, M. (2016). Effects of family involvement with students at risk for reading disability. *Ocnos, 15* (1), 7-21. doi: 10.18239/ocnos_2015.1.866

Introduction

The presence of students with learning problems has a great impact on the educational system. Some recent data show that this population requires special attention. For example, a few years ago, the number of students with some kind of Learning Difficulty (LD) amounted to 2.5 million in the US (Cortiella, 2011). On the other hand, these students represent 41% of the individuals benefiting from special attention by the educational system (IDEA, 2010).

The American Psychiatric Association recently published a new version of its manual to diagnose and classify mental disorders. DSM-V (American Psychiatric Association, 2013) takes the traditional notion of LD within the framework of Specific Learning Disabilities (SLD) and introduces it into a new category called Neurodevelopmental Disorders. Other disorders such as Intellectual Disability (the new designation of Mental Retardation), Communication Disorder, Autism Spectrum Disorders (which includes all Pervasive Developmental Disorder) and Motor Disorders are included in that category together with the SLDs.

Most students with a SLD are linked to problems when learning to read (Spencer et al., 2014). More specifically, recent research shows that the prevalence of specific difficulties in reading comprehension amounts to 6.7% (García, Jiménez, González, & Jiménez-Suárez, 2015). The terms "Reading Difficulty" (RD), "Reading disability" or "Dyslexia" can be used interchangeably to refer to this kind of disorders. According to DSM-V, disorders occur when students have one of these symptoms for six months upon receiving proper instruction: errors when reading words or reading slowly with effort; difficulties to understand the texts they read; difficulties to spell (American Psychiatric Association, 2013). This classification has been criticised because it is believed that this disorder is related to a great extent to many aspects of language that are categorised in a different group: communication disorders (Snowling & Hulme, 2012).

Despite the fact that part of the administrations has officially recognised the existence of these disorders, no agreement has still been reached to clearly define the concept of learning difficulties (Fletcher, Stuebing, Morris & Lyon, 2013). More specifically, alternative definitions have appeared in the field of RDs aiming at making the classification more operational. They can be divided into four major groups: discrepancy models between IQ (intelligence quotient) and performance; cognitive discrepancy models; models of response to instruction or intervention (RI); and hybrid models.

The need to identify any possible risk situations at an early stage is a key factor in the process of detection, evaluation and referral to special education. The objective is clear: working on the possible difficulty before it gets worse and generates more learning gaps or problems affecting the student's development. Delays in the development of a specific capacity can be temporary to some students and they can possibly be fixed through earlyefficient actions in the classroom, but that is not always the case. When a difficulty arises, the suitability of the kind of instruction in the student's everyday environment must be analysed and modified, if necessary. Upon verifying that all appropriate means have been provided in the school and upon failure to have the expected result, the need to refer the student to the special education services can be envisaged. This is the main objective of RI models: verifying that the educational support received by the student through the appropriate channels is suitable and, if not, providing the means to reverse the situation and being ready to address it to a more intensively if the student does not respond to the instruction changes in the classroom either (Compton et al., 2012; Fuchs & Vaughn, 2012).

When assessing LDs focusing on the RI models, the support and cooperation of the student's family is required. In first instance,

the parents may be the first to suspect an existing difficulty, sometimes when they notice a certain delay in the development of any skill or in learning when compared to other students his/her same age. Regarding educational interventions with those students with special educational needs (SEN), it is essential to promote educational services in the student's natural environment to involve his/her family and professionals in the decision-making process more efficiently. It is also needed to makethe student's transition from one kind of educational intervention to another easier according to the intensity that is considered necessary (IDEA, 2004). Several educational policies are being addressed in this sense (IDEA, 2010), and research is being carried out by the major researchers and organisations in the field of LDs (NJCLD, 2006).

If we focus on the role that families can play in their children's education process, it has been found that they have an influence in different areas of development (Azpillaga, Intxausti & Joaristi, 2014; Redding, 2000). Some studies show that the parents' dedication through an appropriate educational strategy has a positive effect, among others, on motivation and academic performance of their children, as well as when they are learning to read (Blanch, Durán, Valdebenito & Flores, 2013; Fuentes, García, Gracia & Alarcón, 2015; Goikoetxea & Martínez, 2015; Sheldon, 2002). The families' involvement (FI) has been related to indicators of academic success that include very different aspects of school life. Among others, the following aspects should be emphasised: lower dropout rate among teenagers, lower number of students who repeat grade, competency perceptions by the teacher or better grades and scores in performance tests (Henderson & Mapp, 2002; Hill & Taylor, 2004; Sukhram & Hsu, 2012). On the other hand, the level of educational involvement by the families is related to other psychological process (adaptation to the school, social relations or communicative competency). It also promotes greater development through motivational, cognitive, social and behavioural aspects (Etxeberria, Intxausti & Joaristi, 2013; Hoover-Dempsey, Walker, Sandler, Whetsel, Green, Wilkins & Closson, 2005).

In the last few years, there has been a remarkable increase in the number of studies that try to approach in greater depth the learning strategies used by students to face their educational tasks in a self-regulated way. This topic has become especially important in interventions designed and put into practice to work on some students with LDs. Families that are committed to their children's education have proven to be a great source of self-regulating learning strategies (Hoover-Dempsey et al., 2005; Zimmerman & Schunk, 2001) that can make up for the shortfall that students with LDs have (Mautone, Marshall & Sharman, 2012; Reyero & Tourón, 2003).

One common aspect to all students is considering motivation in reading as one of the variables that can condition reading habits to a greater extent and Reading achievement consequently (Dezcallar, Clariana, Cladelles, Badia, & Gotzens, 2014). Some studies have found these motivation attitudes as a result of the families' involvement (Beltrán Llera, López Escribano & Rodríguez Quintana, 2006), the households' literacy atmosphere (Sénéchal, 2006; Blanch et al., 2013) and the specific actions taken by the families to encourage their children to read (Sonnenschein, 2002; Baker, 2003; Topping, Dekhinet & Zeedyk, 2011).

This study aims at analysing the relation between family involvement and Reading achievement, both in houses with children who are learning to read normally and with children at risk of having some sort of learning difficulty. There are family reading programmes applied practically and easily that can be a good way for parents to help their children, especially when they have learning problems. Nowadays, most parents have serious difficulties to find time to help their children. Although it is important that families spend effective time on the children's education in an informal way, it is

advisable that they know and apply proved programmes that can be put into practice easily and practically.

Method

It is a quasi-experimental research where a pretest-postest design with control group has been used.

Objective and Hypothesis

This work's objective is testing if the family reading programme "Would you please read me a story?" improves the Reading achievement of Year 1 students. Another aim is testing if this impact takes place regardless of whether students learn to read normally or are at risk of having any RD.

Therefore, the following substantive hypotheses rise:

- The involvement of parents through the "Would you please read me a story?" programme improved their children's Reading achievement (RP).
- The positive effects of the programme are obtained in all students, irrespective of their reading level at the beginning of the programme.
- During the initial assessment, the portion of students of the experimental group at risk of having reading disability is reduced at the end of the programme to a greater extent than those students from the control group in the same situation.

Process

Two groups were created to prove the programme's effects: the experimental group is composed of students whose families applied the programme and documented it in the weekly record sheets. The control group is composed of students whose families have allowed the collection of data of their children on the variables that are being analysed, but declined to participate in the programme. In last place, there is a third group that was not present at the initial design phase, called "experimental group without follow-up", composed by families who initially decided to participate in the programme but dropped out during the same.

During the first quarter, visits to schools that might potentially participate in the programme were conducted, in order to hold any relevant meetings with the management and the Guidance Department thereof. At those meetings, the characteristics and particularities of the programme were set forth, as well as a potential application schedule.

After having obtained an affirmative answer from the management body of each school, the programme was thus presented. In first place, the teaching staff received training so that it could answer the parents' questions and later introduced itself to all the families with children in Year 1. Communication was conducted by writing and e-mail or by letter signed by the school's management and the person in charge of the study. An explanatory leaflet describing the programme's characteristics was provided together with that letter. From the beginning, they were given the opportunity to consult any doubt through an e-mail address created specifically for the programme. In the following days, the registration forms signed by the families were collected with the collaboration of the teaching staff. It was established that at least 25% of the families participated in the programme and were included in the experimental group, so that it was sufficiently representative.

The programme is called "Would you please read me a story?" At the beginning, the families were invited to get involved in their children's reading learning for twelve weeks. More specifically, they were encouraged to hold two reading meetings with their children everyday and spend some time reading together but following a series of recommendations. The minimum recommended participation period was four reading days a week; this way, the problems to perform the programme everyday were taken into account through flexibility so

that the families could organise their schedules depending on each household's features. The two times of the day for family reading proposed have different characteristics:

1. In the afternoon, a family member asked the child to read for a while (in a low voice preferably), 10-15 minutes approximately. While the child is reading, it is recommended that the family member is in the same room and focused on the child as much as possible. In addition, the families were advised to alternate different types of actions after reading in order to improve reading comprehension, promote awareness of shared activity and avoid drudgery, demotivating the children. Here are some of the examples proposed:
   - Asking the child to tell something about what he/she just read.
   - Telling if he/she knows any similar story.
   - Making up what goes next.
   - When the child finishes reading, asking him/her questions to see how well he/she understood.
   - Imagining a new character appears in the story.
   - Trying to guess what may happen next in the story as a game.
2. In second place, around dinner time or just before going to bed, a family member would read a story to the child for a while. If he/she is not tired and at the child's request, they both could talk about what they just read.

Regarding the ethical aspects of the study, the families had one week from the Programme's presentation to decide whether they were participating or not, and whether they agreed that data on their children were collected even if they did not participate in the programme. During those days, the families made queries on different topics: the time necessary to complete the programme, the confidentiality of the data received, what kind of texts were recommended, the programme's follow-up, etc.

The next step was to perform the initial reading assessment and, upon completing thereof, the programme started for two weeks. In order to implement the programme more easily, during this period certain customised consultation and follow-up mechanisms by e-mail or phone were available to the families.

The programme was followed-up in different ways:

- There were visits to each school to consult the Management, the Guidance Department and the tutors especially, and what the comments from the families were. This way, when necessary, the measures to solve the problems that emerged in each school were established.
- On the other hand, the researchers contacted the families twice during the process, either by phone or e-mail, to verify the programme's implementation, collect information from the weekly record sheets and offer some advice.
- At this stage of the process, it was noted that some families had dropped out the programme and other families in need of guidance were offered it.
- The families filled in a weekly record sheet that included several close-ended questions on the way they implemented the programme and an open-ended question to address the suggestions and difficulties they faced in their personal circumstances, which also allowed to assess their follow-up of the programme and their opinion better.

In last place, the final assessment of all students was performed. In this assessment, RP was reassessed, and motivation and the students' attitude towards reading were also taken into account.

Participants

The children of those families participating in this study are students who may have a RD or not, who acquire and strengthen a key part of learning to read when they are enrolled in Year 1 of Primary Education. Since this is a quasi-experimental study that works on an incidental sample, the highest representativeness was an objective when selecting the schools, taking the different population differences in certain

variables into account, such as the socio-economic level and the type of school.

The sample is made up of 206 students, 53% of which were girls (N=110) and 47% were boys (N=96) and their families. The students are enrolled in two public schools (N=87: 47 girls and 40 boys), two private schools (N=79: 45 girls and 34 boys) and a subsided school (N=40: 18 girls and 22 boys) located in different areas of the Autonomous Community of Madrid: Alcobendas, Las Rozas and Vallecas.

The families were distributed depending on their participation in the programme as follows: 24.3% (N=50) of the sample was the control group; 35.9% (N=74) was the experimental group without follow-up; and 39.8% (N=82) was the experimental group.

As far as any possible learning difficulties at the beginning of the programme are concerned, the number of students having a reading skill below each subscale's rate is shown in Table 4. The proportion of students in this situation and that of students having normal reading depending on the groups participating in the programme are similar and very close to the sample's total average. The proportion of students of the experimental group in the subscale Oral Comprehension is the only exception, since it is 5% below the average.

The families of these schools belong to diverse socio-economic groups. The following distribution is based on the annual family income: 23% below EUR 30,000; 29% between 30,000 and EUR 50,000; and 48% above EUR 50,000. The cultural levels are diverse too. If we take the relatives' level of education, 20% does not have a Secondary Education Diploma and 56% have a Bachelor's Degree.

Instruments

Reading achievement

To assess the reading learning process, several subscales of the PROLEC-R (Cuetos, Rodríguez & Ruano, 2007) standardised test were applied, which evaluate the different processes engaged in reading. PROLEC-R provides a regulatory category for each of these processes (if it is between one or two standard deviations below the average, it is classified as "Mild disability" and, if it is further than two deviations, it is classified as "Severe disability") and has a total internal consistency of 0.79.

Two of the subscales are related to the lexical process -Reading of words (RW) and Reading of pseudowords (RS)- and two are related to the semantic process -Text comprehension (TC) and Oral Comprehension (OC)-. The data shown in the tables correspond to the direct scores obtained. The subscales of the lexical process measure the number of hits and the time used to read the words. In the subscales of the semantic process, the Text Comprehension score has a measurement scale ranging from 0 to 16, whilst that of Oral Comprehension ranges from 0 to 8.

Programme assessment. Weekly record sheet and follow-up of the Programme's application

In order to perform a follow-up of the programme, the families had to fill in a record every week. This record showed how the daily sessions developed. Upon filling in the sheets, the experimental groups -with or without follow-up- were established. The template is composed of a first part with five close-ended questions and one where comments on any suggestions or difficulties that may emerge during the week can be included. This kind of open-ended questions provide information to identify the weaknesses and establish those parts of the programme that can be improved (Patton, 2011).

Data analysis

In first place, descriptive analysis of the variables measures was performed, both in the initial and final assessment. The effects on the variables studied have been analysed through variation analysis and post hoc, multiple comparison tests (Scheffé). The significance level used was .05. The effect size values were calculated.

The analyses were performed using the Program SPSS, version 19.0.

Results

The follow-up of the family involvement programme performed by each family had specific characteristics. There were differences in aspects such as the parents' perception of the attitude of their children towards reading, the way they support reading comprehension as a family, the reading time or the frequency and the way they read to their children. These differences depend both on certain family perceptions (motivation to help their children or the feeling of self-efficiency as educators) and on certain objective conditioning factors (working hours or number of siblings, among others). Indeed, it was considered that the families followed the programme if they documented they had read with their children at least 3 days a week on the weekly record sheet.

Three out of four families stated that their children had a positive attitude towards reading, a proportion that was very similar to that of families that stated they read to their children at the end of the day. On the other hand, 81% of the families that participated in the programme carried out some additional work with their children in terms of reading comprehension, half of them by asking direct questions, whilst only 4% used inferences. Most families and children read together for 10-15 minutes; 59% of the families recorded that time, whilst 20% affirmed that they read for more than 15 minutes and 20% affirmed that they read for less than 10 minutes.

The arithmetic means of Reading achievement of all groups experienced a growth between the initial and the final assessment, excepting the control group's Oral Comprehension. The differences between the initial and the final test

Table 1. Differences and ANOVA between the initial and the final test depending on groups participating in the programme

RP Scales	Groups depending on programme	G	Average	Standard deviation	Difference in averages	*F*	*N.*	η^2
Initial RW	CG	46	49.91	26.69		1.037	.357	.01†
	EGwf	62	44.93	20.08				
	EG	80	51.39	31.65				
	Total	188	48.90	27.10				
Final RW	CG	47	57.55	26.14	+7.64	4.496	.012	.04†
	EGwf	70	56.73	22.04	+11.80			
	EG	82	69.59	35.21	+18.20			
	Total	199	62.22	29.55	+13.32			
Initial RW	CG	46	34.93	14.20		1.476	.231	.02†
	EGwf	61	31.58	10.39				
	EG	80	35.64	16.85				
	Total	187	34.14	14.40				
Initial RW	CG	47	38.57	14.12	+3.63	3.940	.021	.04†
	EGwf	70	38.48	11.56	+6.90			
	EG	82	45.18	20.76	+9.54			
	Total	199	41.26	16.73	+7.11			
Initial RW	CG	46	8.78	3.05		.894	.411	.01†
	EGwf	62	8.82	3.00				
	EG	80	9.44	3.44				
	Total	188	9.07	3.21				
Final RW	CG	47	9.85	2.88	+1.07	6.174	.003	.06††
	EGwf	70	10.64	2.76	+1.82			
	EG	82	11.55	2.53	+2.11			
	Total	199	10.83	2.77	+1.75			
Initial RW	CG	46	2.93	1.67		1.496	.227	.02†
	EGwf	62	2.76	1.51				
	EG	80	3.21	1.57				
	Total	188	2.99	1.58				
Final RW	CG	47	2.75	1.54	-.19	12.121	.000	.11††
	EGwf	70	3.43	1.85	+.67			
	EG	82	4.20	1.51	+.98			
	Total	199	3.58	1.73	+.58			

Note: RW = Reading of words. RS = Reading of pseudowords. TC = Text Comprehension. OC = Oral Comprehension. CG = Control Group. EGwf = Experimental group without follow-up. EG = Experimental group η^2 = .01 - .06 (small effect†), > .06 - .14 (medium effect††), >.14 (big effect†††)

of the control group, the experimental group without follow-up and the experimental group are shown in Table 1. As far as the four scales are concerned, the greater growth always takes place in the experimental group and the lower growth takes place in the control group.

Table 1 also shows the comparison of averages through an ANOVA of the initial and the final assessment depending on the groups participating in the programme. Data on initial RP show that there are no statistically significant differences between the averages, which reflects the equivalence in the initial conditions of the experimental and the control group before the programme was applied. On the contrary, significant differences in the averages of all four final RP dimensions can be noted.

Table 2. Multiple comparisons through Scheffé of the Groups depending on their participation in the programme and LDR risk at the initial RP

			Initial RP			Final RP		
RP scales	(I) Groups depending on the programme and initial RP	(J) Groups depending on the programme and initial RP	Difference in averages (I-J)	*DT*	*p*	Difference in averages (I-J)	*DT*	*p*
RW	CGLDR	EGLDR	4.24	9.60	.999	-.73	10.92	1.000
	CGNP	CGLDR	32.44	8.65	.018	26.04	9.84	.226
		EGLDR	36.68	6.82	.000	25.31	7.76	.064
	EGNP	CGLDR	36.16	8.30	.003	41.67	9.44	.002
		CGNP	3.72	4.82	.988	15.63	5.48	.156
		EGLDR	40.40	6.36	.000	40.94	7.24	.000
RS	CGLDR	EGLDR	4.24	3.88	.999	-3.21	5.26	.996
	CGNP	CGLDR	32.44	3.63	.000	15.42	4.92	.086
		EGLDR	36.68	3.05	.000	12.21	4.14	.127
	EGNP	CGLDR	36.16	3.40	.000	22.96	4.61	.000
		CGNP	3.72	2.42	.997	7.54	3.28	.385
		EGLDR	40.40	2.78	.000	19.76	3.76	.000
TC	CGLDR	EGLDR	4.24	1.12	1.000	-1.61	1.18	.868
	CGNP	CGLDR	32.44	.95	.000	2.73	1.00	.197
		EGLDR	36.68	.79	.000	1.12	.83	.875
	EGNP	CGLDR	36.16	.92	.000	4.44	.97	.001
		CGNP	3.72	.46	.855	1.71	.49	.033
		EGLDR	40.40	.75	.000	2.83	.79	.030
OC	CGLDR	EGLDR	4.24	.50	.998	-2.00	.68	.130
	CGNP	CGLDR	32.44	.41	.000	1.14	.55	.525
		EGLDR	36.68	.39	.000	-.86	.53	.758
	EGNP	CGLDR	36.16	.38	.000	2.28	.53	.003
		CGNP	3.72	.23	.999	1.14	.32	.028
		EGLDR	40.40	.37	.000	.28	.51	.998

Note: RW = Reading of words. RS = Reading of pseudowords. TC = Text Comprehension. OC = Oral Comprehension. CGLDR = Control croup at risk of LDR. CGNP = Control group with a normal initial RP. EGLDR = Experimental group at risk of LDR. EGNP = Experimental group with a normal initial RP.

The eta squared values related to the effect size for the subscales of the semantic processes (Text Comprehension and Oral Comprehension) are intermediate: $\eta^2 = .06$ y $\eta^2 = .11$, respectively. On the other hand, the scales on lexical processing (Reading Words and Reading Pseudowords) show a small impact: $\eta^2 = .04$ in both cases. The programme's efficiency is relevant and has a greater impact on the Reading achievement related to reading and oral comprehension.

In the multiple comparisons through post hoc tests (Scheffé), statistically significant differences between the experimental group and the other two groups in favour of the former can be noted. More specifically, there are significant differences in performance when Reading words and Reading Pseudowords between the experimental group and the experimental group without follow-up (p = .026 and .046, respectively). On the other hand, as far as Text Comprehension and Oral Comprehension are concerned, differences are significant between

the experimental group and the control group (p = .003 and <.000).

When studying these results in depth, all the groups were analysed depending on their participation in the programme, with special emphasis being placed on the control group and the experimental group. This decision is based on the assumption that the families from the experimental group without follow-up started the programme but did not complete it, and they cannot thus be considered either part of the control group, since they started a special involvement at the beginning of the programme, nor part of the experimental group since they did not complete the scheduled period.

Table 2 shows the multiple comparisons (Scheffé) depending on the participation in the programme and the RP in the pretest. The resulting groups are the "Control group at risk of RD" (CGRD), the "Control group with and initial normal RP" (CGNP), the "Experimental group at risk of RD" (EGRD) and the "Experimental group with an initial normal RP" (EGNP). The differences in the initial test between the two groups with a normal RP (CGNP and EGNP) and the two groups at risk of RD (CGRD and EGRD) are -obviously- significant irrespective of their participation in the programme since the pretest's RP was considered one grouping criterion. On the contrary, the absence of differences between the groups with a similar initial RP, irrespective of whether they belong to the experimental or the control group (.999 and .988 in RW, .999 and 997 in RS; 1.000 and .855 in TC; .998 and .999 in OC) confirms the equivalence of the groups before the programme was applied.

The relevant data from Table 2 require attention on the significance of the differences in the averages of the final test. The significant differences noted in the initial test between the CGNP and the CGRD and the y EGRD remain

Table 3. Descriptive elements of the initial and final Reading Performance (RP) depending on the presence of Learning Difficulties with Reading (LDRs) in the Programme's Groups. Difference in the averages and in the effect size

			Initial test		Final test					
RP Scales	Groups depending on the programme and initial RP	N	Average	Standard deviation	Average	Standard deviation	Difference in averages	Growth FT-IT (%)	Growth. diff. EG-CG	d
RW	CGLDR	9	23.82	6.17	37.01	15.35	13.19	55%		.86†††
	EGLDR	17	19.57	6.29	37.74	11.10	18.16	93%	37%	1.64††
	CGNP	37	56.26	25.89	63.05	25.97	6.79	12%		.26†
	EGNP	63	59.98	30.23	78.68	34.85	18.70	31%	19%	.54††
RS	CGLDR	13	20.14	5.10	27.86	7.92	7.72	38%		.98†††
	EGLDR	22	18.45	5.69	31.07	10.60	12.61	68%	30%	1.19††
	CGNP	33	40.76	12.23	43.28	13.61	2.52	6%		.18†
	EGNP	58	42.16	14.97	50.82	21.42	8.66	21%	14%	.40††
TC	CGLDR	7	3.29	1.50	7.57	4.47	4.29	130%		.96†††
	EGLDR	11	3.45	1.63	9.18	2.56	5.73	166%	35%	2.24††
	CGNP	40	9.75	2.01	10.30	2.39	.55	6%		.23†
	EGNP	69	10.39	2.58	12.01	2.21	1.62	16%	10%	.73††
OC	CGLDR	10	.90	.57	2.00	1.49	1.10	122%		.74††
	EGLDR	11	.64	.50	4.00	.89	3.36	529%	406%	3.76††
	CGNP	37	3.51	1.39	3.14	1.57	-.38	-11%		-.24
	EGNP	69	3.62	1.26	4.25	1.56	.65	18%	29%	.42†

Note: RW = Reading of words. RS = Reading of pseudowords. TC = Text Comprehension. OC = Oral Comprehension. CGLDR = Control croup at risk of LDR. CGNP = Control group with a normal initial RP. EGLDR = Experimental group at risk of LDR. EGNP = Experimental group with a normal initial RP. d = .2 (small effect†), d = .5 (medium effect†††), d = .8 (big effect†††)

Table 4. Number of students at risk of LDR and proportion that leave said situation between the initial and the final assessment

	RW1		RW2		RS1		RS2		TC1		TC2		OC1		OC2	
	N	LDRr (%)	N	LDRr (%)	N	LDRr (%)	N	LDRr (%)	N	LDRr (%)	N	LDRr (%)	N	LDRr (%)	N	LDRr (%)
CGLDR	9	20%	3	7%	13	28%	7	15%	7	15%	4	9%	10	21%	9	20%
CGNP	37		43		33		39		40		42		37		37	
EGLDRwf	14	23%	4	7%	15	25%	6	10%	8	13%	2	3%	14	23%	9	15%
EGNPwf	47		56		46		54		52		58		46		51	
EGLDR	17	21%	5	6%	22	28%	8	10%	11	14%	1	1%	11	14%	2	3%
EGNP	63		75		58		72		69		79		69		78	
Total LDR	40	21%	12	6%	50	27%	21	11%	26	14%	7	4%	35	19%	20	11%
	147		174		137		165		161		179		152		166	

Note: RW = Reading of words. RS = Reading of pseudowords. TC = Text Comprehension. OC = Oral Comprehension. CGLDR = Control croup at risk of LDR. CGNP = Control group with a normal initial RP. EGLDR = Experimental group at risk of LDR. EGNP = Experimental group with a normal initial RP.

the same in the final test; nevertheless, the significant differences between the EGNP and the CGRD and EGRD do not exist in the final test. On the other hand, it is interesting to see the significant differences in the final test of TC and OC between the EGNP and the CGNP, with a value of .03 in both cases, which did not exist in the beginning.

Table 3 below shows the differences in the averages between the initial and the final test within each group and for all four subscales, with the average's growth rate, the difference between the growth rate of the experimental group compared to the control group and the effect size. The results show that the evolution is always more favourable in the experimental group than in the control group, regardless of the scale and starting point regarding the reading skill. In other words, those students whose families participated in the programme obtain better results to a greater extent, both those who potentially had a RD at the beginning and those with an initial normal RP. This is also reflected in the fact that the sizes of the impact of the experimental group are bigger than its pair from the control group. The greatest effect sizes correspond to the EGRD, whose values in all scales are $d > .80$.

In last place, it is interesting to note how the number of students who could potentially have a RD (Table 3) at the beginning of the programme changes. This comparison should be performed in each one of the scales independently since these are different aspects related to the reading skill and the students may have problems in only one or more of those areas. In first place, it should be underlined that in the pretest (RW1, RS1, TC1 and OC1) the proportion of students at risk of having difficulties is almost the same in each one of the groups, excepting in the initial OC test where only 14% of the students from the experimental group are in this situation compared to 21% and 23% from the control group and the experimental group without follow-up, respectively. A greater decrease is experienced in all the scales regarding the number of students at risk of having a RD within the experimental group compared to other groups. When analysing the variations between the control group and the experimental group, it can be noted that the difference in the proportions is small in the case of RW, just 1% in favour of the experimental group. Nevertheless, the difference in the proportion of students who are removed from the category of potential learning difficulties is far higher for the other subscales: 5% in RS; 7% in TC; and 10% in OC. This data show a remarkable advantage when preventing RDs in the experimental group compared to the control group.

Discussion and conclusions

This work aims at confirming the hypothesis on the impact of family involvement through the "Would you please read me a story?" programme on the Reading achievement of Year 1 students. The programme aims at improving reading of those students who learn to read normally or are at risk of having any difficulty to read.

When studying in depth the differences that emerge between the groups without taking the variable LD into account and analysing the RP's evolution between the initial and the final test, a greater growth in all four subscales of the experimental group compared to the scores of the control group can be noted. This way, the first hypothesis on the efficiency of family involvement in the learning to read through the "Would you please read me a story?" programme is confirmed. Therefore, the results are in line with those obtained in other similar studies (Miller, Topping y Thurston, 2010; Sukhram & Hsu, 2012).

Van Steensel, McElvany, Kurvers & Herppich (2011) performed a meta-analysis to study the effects of family involvement programmes that provided them with a weighted average of the effect size in programmes aimed at promoting reading comprehension, on the one hand, and decoding, on the other. This fact resulted in average weighted effect sizes of d = .22 and d = .17, respectively. The study by Blanch *et al.* (2013) also show significant differences in the reading comprehension of the experimental group compared to the control group with an effect size η^2 = .11. In our study, the effect size for the scales of semantic processing is medium and the greatest effect size obtained in the post-test is also consistent with the data obtained in other similar studies (Blanch *et al.*, 2013).

In the multiple comparisons through post hoc tests, the evolution of the significant difference in RP between the "Control group at risk of RD", the "Control group with and initial normal RP", the "Experimental group at risk of RD" and the "Experimental group with an initial normal RP". Obviously, the differences are significant at the beginning between the groups with a normal performance and those with potential difficulties because the same criterion was used to group them, but the behaviour between the groups varies at the end of the programme depending on the participation in same.

The significant differences noted at the beginning within the control group for the groups who learn normally and at risk of having a RD disappear for all RP scales during the programme's implementation. On one hand, this behaviour might be due to the fact that the growth in the reading development of the students from the control group with a normal performance stagnates. On the other hand, it might be due to the fact that the students with difficulties have more scope for improvement since they are below the average level. The behaviour behaves very differently, because a greater number of students with difficulties make a quantum leap in their final competency. The second hypothesis endorsing the view that these FI programmes are efficient both for those students who learn to read properly and those exposed to risk situations that might result in reading disabilities that should therefore be prevented (Mautone, Marshall and Sharman, 2012) is confirmed by the fact that the significant post-test differences remain the same between the experimental group with an initial normal performance and those groups with potential difficulties.

The evolution of the subscales of the semantic field, reading comprehension and oral comprehension, where a remarkably greater increase in the final RP in the experimental group is identified, is one aspect that is especially relevant. This way, in view of the data collected, it can be stated that semantic processing is more influenced by the family reading programme.

The effect size for those groups of students with potential difficulties at the beginning of the programme is far higher than that of those students with an initial performance appro-

priate to their age. Although this situation is repeated both in the control group and the experimental group, the values are notably higher in the experimental group for all the scales. The reason for such high effect size values in the control group might be -as stated before- the greater scope for improvement from very low levels of initial RP and, on the other hand, the fact that those students did not really have a RD but were probably lacking enough maturity to develop those reading skills instead. In any case, in analysing the differences in the pretest and postest differences within the groups participating in the programme and taking into account the starting point of their reading learning process, in both initial situations (at risk of RD or learning appropriately to their age), the effect size of the experimental group is always high and also notably higher to that of the control group. This way, the second hypothesis that was supposed to verify the positive effect of family involvement through the programme -irrespective of whether the students had a normal RP at the beginning of the study- can also be confirmed.

The proportion of students who improved their RP and leave the standardised category of learning disability is larger in the experimental group compared to the control group of all the scales of RP. According to the guidelines of the last issue of the DSM-5 manual (American Psychiatric Association, 2013) to diagnose a specific learning disability, one of the symptoms has to emerge during six months at least. Educational recommendations aim at promoting early assessment and intervention to prevent deterioration of problem situations because any means to improve instructions are implemented too late (Compton *et al.*, 2012). Therefore, should a student have any reasonable indication of any potential learning problem, a confirmed diagnoses should not be waited for before taking any necessary action. In this sense, this study shows the key role played by families -when their children are enrolled in Year 1 of Primary Education- is essential to get the most out of such an important stage of their reading learning process, especially when they are at risk of having any disability. This situation must not lead to confuse parents with just another therapist, something that has many times proved to be a source of conflict in the parent-child relationship.

The complications faced by the families when supporting their children requires the implementation of educational programmes executed at home to provide parents with educational guidance aimed at achieving the necessary balance between family involvement and children's autonomy (Van Voorhis, Maier, Epstein, Lloyd & Leung, 2013). The programme prepared and presented in this article aims at promoting certain family commitment strategies in the educational process of their children, as well as at creating environments that generate positive attitudes towards reading as a competency of great interest both from the training and academic point of view.

One limitation in this study refers to the sample size because the number of children at risk of RDL is small both in the control group and the experimental group, although it is in line with other studies of an experimental nature. Likewise, the number of families that started the programme dropped notably during its implementation. Despite the fact that several follow-up actions aimed at preventing families from drawing back were taken through different means (e-mails and phone calls), they seem insufficiently effective. It would be advisable to take steps to bond families in the programme's implementation, paying special attention to festive seasons when the household routines are disrupted and which constitute a serious risk to the programme's continuity.

One line of work that is becoming increasingly interesting given the existing situation stands up on the basis of studying in depth how excessive family involvement affects the children's education process. It is becoming increasingly usual to find families who support their children's educational attention in excess instead of lacking said attention, which under-

mine their children's personal autonomy and their ability to face problems confidently (Cerezo, Sánchez, Ruiz & Arense, 2015; Martín & Gairín, 2007; Piñero, Arense & Cerezo, 2013).

References

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. Washington, DC: APA.

Azpillaga, V., Intxausti, N., & Joaristi, L. (2014). Implicación de las familias en los centros escolares de alta eficacia en la comunidad autónoma vasca. *Bordón. Revista de Pedagogía, 66.3*, 27-37. doi: 10.13042/Bordon.2014.66302

Baker, L. (2003). The role of parents in motivating struggling readers. *Reading & Writing Quarterly, 19*, 87-106.

Beltrán, J., López-Escribano, C., & Rodríguez-Quintana, E. (2006). Precursores tempranos de la lectura. In C. Hernández & M. Veyrat (Coords.), *Lingüística clínica y neuropsicología cognitiva. Actas del Primer Congreso Nacional de Lingüística Clínica (Vol. 2): Lingüística y evaluación del lenguaje* (pp. 18–26). Madrid: UCM.

Blanch, S., Durán, D., Valdebenito, V., & Flores, M. (2013). The effects and characteristics of family involvement on a peer tutoring programme to improve the reading comprehension competence. *European Journal of Psychology of Education, 28*, 101-119. doi: 10.1007/s10212-012-0104-y

Cerezo, F., Sánchez, C., Ruiz, C., & Arense, J. J. (2015). Roles en bullying de adolescentes y preadolescentes, y su relación con el clima social y los estilos educativos parentales. *Revista de Psicodidáctica, 20*, 139-155. doi: 10.1387/RevPsicodidact.11097

Compton, D. L., Gilbert, J. K., Jenkins, J. R., Fuchs, D., Fuchs, L. S., Cho, E., & Bouton, B. D. (2012), Accelerating chronically unresponsive children to Tier 3 instruction: What level of data is necessary to ensure selection accuracy? *Journal of Learning Disabilities, 45*, 204–216. doi: 10.1177/0022219412442151

Cortiella, C. (2011). *The state of learning disabilities*. New York, NY: National Center for Learning Disabilities.

Cuetos, F., Rodríguez, B., & Ruano, E. (2007). *Batería de evaluación de los procesos lectores del niño de Educación Primaria, Revisada (PROLEC-R)*. Madrid: TEA.

Dezcallar, T., Clariana, M., Cladelles, R., Badia, M., & Gotzens, C. (2014). La lectura por placer: su incidencia en el rendimiento académico, las horas de televisión y las horas de videojuegos. *Ocnos, 12*, 107-116. doi: 10.18239/ocnos_2014.12.05

Etxeberria, F., Intxausti, N., & Joaristi, L. (2013). Factors favouring the educational involvement of immigrant families with children in Primary Education. *Revista de Psicodidáctica, 18*, 109-135. doi: 10.1387/RevPsicodidact.5684

Fletcher, J. M., Stuebing, K. K., Morris, R. D., & Lyon, G. R. (2013). Classification and definition of learning disabilities: A hybrid model. In H. L. Swanson & K. Harris (Eds.), *Handbook of learning disabilities* (2nd ed) (pp. 33–50). New York, NY: Guilford Press.

Fuchs, L. S., & Vaughn, S. (2012). Responsiveness-to-intervention: A decade later. *Journal of learning disabilities, 45*, 195-203. doi: 10.1177/0022219412442150

Fuentes, M. C., García, F., Gracia, E., & Alarcón, A. (2015). Los estilos parentales de socialización y el ajuste piscológico. Un estudio con adolescentes españoles. *Revista de Psicodidáctica, 20*, 117-138. doi: 10.1387/RevPsicodidact.10876

García, E., Jiménez, J. E., González, D., & Jiménez-Suárez, E. (2015). Problemas de comprensión en el alumnado de Educación Primaria y Educación Secundaria Obligatoria: Un estudio de prevalencia en español. *European Journal of investigation in health, psychology and education, 3*, 113-123. doi: 10.1989/ejihpe.v3i2.28

Goikoetxea, E., & Martínez, N. (2015). Los beneficios de la lectura compartida de libros: Breve revisión. *Educación XX1, 18(1)*, 303-324. doi: 10.5944/educXX1.18.1.12334

Henderson, A. T., & Mapp, K. L. (2002). *A new wave of evidence: The impact of school, family, and community connections on student achievement*. Austin, TX: Southwest Educational Development Laboratory.

Hill, N. E., & Taylor, L. C. (2004). Parental School Involvement and children's academic achievement: Pragmatic and issues. *Current Directions in Psychology Science, 13*, 161-164.

Hoover-Dempsey, K. V., Walker, J. M. T., Sandler, H. M., Whetsel, D., Green, C. L., Wilkins, A. S., & Closson, K. E. (2005). Why do parents become involved? Research findings and implications. *Elementary School Journal, 106*, 105-130.

Individuals with Disabilities Education Improvement (IDED) (2004) Act of 2004, Pub. Law No. 108-446, 118 Stat. 2647 (2004). *Enacted H. R. 1350; 108 Enacted H. R. 1350. Final regulations implementing IDEA 2004 were published in the Federal Register, Monday, August 14, 2006, pp. 46540–46845*. Retrieved from http://www.IDEAdata.org

Individuals With Disabilities Education (IDED) (2010) Act, Part B Child Count. (2010). *Students ages 6-21*. Recuperado de http://www.IDEAdata.org

Martín, M., & Gairín, J. (2007). La participación de las familias en la educación: un tema por resolver. *Bordón. Revista de Pedagogía, 59* (1), 113-151.

Mautone, J. A., Marshall, S. A., Sharman, J., Eiraldi, R. B., Jawad, A. F., & Power, T. J. (2012). Development of a Family-School intervention for young children with Attention Deficit Hyperactivity Disorder. *School Psychology Review, 41*, 447-466. Retrieved from http://www.ncbi.nlm.nih.gov

Miller, D., Topping, K., & Thurston, A. (2010). Peer tutoring in reading: The effects of role and organization on two dimensions of self-esteem. *British Journal of Educational Psychology, 80*, 417-433. doi: 10.1348/000709909X481652

National Joint Committee on Learning Disabilities (NJCLD) (2005). *Responsiveness to intervention and learning disabilities*. Retrieved from http://www.ldonline.org

National Joint Committee on Learning Disabilities (NJCLD) (2006). *Learning Disabilities and Young Children: Identification and Intervention*. Retrieved from http://www.ldonline.org

Patton, M. Q. (2011). *Developmental evaluation: Applying complexity concepts to enhance innovation and use*. New York: Guilford Press.

Piñero, E., Arense, J., & Cerezo, F. (2013). Contexto familiar y conductas de agresión y victimización entre escolares de educación secundaria. *Bordón. Revista de Pedagogía, 65* (3), 109-129. doi: http://dx.doi.org/10.13042/23167

Redding, S. (2000). *Familias y centros escolares. Series de Prácticas Educativas, 2*. Bruselas: Academia Internacional de Educación.

Reyero, M., & Tourón, J. (2003). *El desarrollo del talento: La aceleración como estrategia educativa*. La Coruña: Netbiblo.

Sénéchal. M. (2006). *The effect of family literacy interventions on children's acquisition of reading: A meta-analytic review*. New Hampshire: National Center for Family Literacy.

Sheldon, S. B. (2002). Parents' social networks and beliefs as predictors of parent involvement. *The Elementary School Journal, 102*, 301–316.

Snowling, M. J, & Hulme, C. (2012). Annual Research Review: The nature and classification of reading disorders – a commentary on proposals for DSM-5. *Journal of Child Psychology and Psychiatry, 53*, 593-607. doi: 10.1111/j.1469-7610.2011.02495.x

Sonnenschein, S. (2002). Engaging children in the appropriation of literacy: The importance of parental beliefs and practices. In O. Saracho & B. Spodek (Eds.), *Contemporary perspectives in early childhood education* (pp. 127-149). Greenwich, CT: Information Age Publishers.

Spencer, M., Wagner, R. K., Schatschneider, C., Quinn, J. M., Lopez, D., & Petscher, Y. (2014). Incorporating RTI in a hybrid model of reading disability. *Learning Disability Quarterly, 37*, 161-171. doi: 10.1177/0731948714530967

Sukhram, D. P., & Hsu, A. (2012). Developing reading partnerships between parents and children: A reflection on the Reading Together Program. *Early Childhood Education Journal, 40*(2), 115-121. doi: 10.1007/s10643-011-0500-y

Topping, K., Dekhinet, R., & Zeedyk, S. (2011). Hindrances for parents in enhancing child

language. *Educational Psychology Review,* 23, 413-455. doi: 10.1007/s10648-011-9169-4

Van Steensel, R., McElvany, N., Kurvers, J., & Herppich, S. (2011). How effective are family literacy programs? Results of a meta-analysis. *Review of Educational Research, 81*, 69-96. doi: 10.3102/0034654310388819

Van Voorhis, F. L., Maier, M. F., Epstein, J. L., Lloyd, C. M., & Leung, T. (2013). *The impact of family involvement on the education of children ages 3 to 8: A focus on literacy and math achievement outcomes and social-emotional skills*. New York City: MDRC. Retrieved from http://www.mdrc.org/

Zimmerman, B. J., & Schunk, D. H. (Eds.). (2001). *Self-regulated learning and academic achievement: Theoretical perspectives* (2nd ed.). Mahwah, NJ: LEA.