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Does parental involvement matter in children's performance? A Latin American primary school study☆

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ABSTRACT

This study explores the relationship between parental involvement in school activities and primary school students' performance in reading and math in Latin America. We applied four-level multilevel analysis to data from the Second Regional Comparative and Explanatory Study (LLECE/UNESCO, 2012). The sample encompassed 3000 schools and approximately 180,000 3rd and 6th grade students from 15 Latin American countries. The analysis found that parental involvement in the school and the educational process has a direct effect on students' academic achievement. Third-grade students who received parental help with homework achieved higher academic scores in both subjects; there was an LLECE/UNESCO, even greater difference when the mother provided this help. When parents attended meetings with the principal and teachers, as well as participated in extracurricular activities, there was a noticeable effect on students' performance in both subjects.

¿La implicación de las familias influye en el rendimiento? Un estudio en educación primaria en América Latina

Palabras clave:
Implicación familiar
Rendimiento
Educación primaria.

RESUMEN

Este estudio explora la relación entre la participación de los padres en las actividades escolares y el rendimiento de los estudiantes de primaria en lectura y matemáticas en América Latina. Aplicamos análisis multinivel de cuatro niveles a los datos del Segundo Estudio Regional Comparativo y Explicativo (LLECE/UNESCO, 2012). La muestra abarcó 3.000 escuelas y aproximadamente 180.000 estudiantes de 3° y 6° grado de 15 países latinoamericanos. El análisis encontró que la participación de los padres en la escuela y el proceso educativo tiene un efecto directo en el rendimiento académico de los estudiantes. Los estudiantes de tercer grado que recibieron ayuda de los padres con la tarea lograron puntajes académicos más altos en ambas materias; había una diferencia aún mayor cuando la madre proporcionaba esta ayuda. Cuando los padres asistieron a reuniones con el director y los maestros, y participaron en actividades extracurriculares, hubo un efecto notable en el rendimiento de los estudiantes en ambas materias.

Introduction

Families send their children to school with the strong belief and hope that they will acquire the necessary knowledge and skills to become integral members of society. These parental expectations cut across nationality, socio-economic level and cultural background, which facilitates ongoing interaction and communication between home and school. However, there is sometimes contradictory evidence about the type of partnership and collaboration that needs to happen between home and school in order to improve learning and performance (Werf, Creemers, & Guldemond, 2010). Studies suggest that parents' involvement with schools falls on a wide spectrum: Some obtain little information about the school or their children's performance, while others join parent associations and search for more autonomy and complex information. It is clear from the literature that parental involvement exerts more obvious effects in secondary than primary education

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(Cooper, Steebergen-Hu, & Dent, 2012; Dumont, Trautwein, Nagy, & Nagengast, 2014; Fuentes & García, 2004; Fuentes, García, Gracia, & Alarcón, 2014; Lee, 2018; Muller, 2018; Nagengast, 2015; Suárez-Álvarez, Fernández-Alonso, & Muñiz, 2014; Xu & Wu, 2013; Xu, Xu, & Xu, 2014).

To begin addressing this gap, our study explores the relationship between students' performance in reading literacy and math in Latin American primary school and the different methods of parental involvement. To this end, we applied four-level multilevel analysis to data from the Second Regional Comparative and Explanatory Study (LLECE/UNESCO, 2008). The sections that follow provide a review of the relevant literature, a description of the method and findings, and a discussion of the study's implications and limitations.

Involvement, learning, and performance

Studying a group of North American tenth graders, Houtenville and Smith (2008) found that family attendance at school meetings has a positive and statistically significant effect on students' performance. Similarly, found that parents' involvement in school-sponsored events and lectures conferred positive effects (Etxeberria, Intxausti, & Joaristi, 2013). Likewise, found that parental involvement in school management and decision-making was positively correlated with student performance (Bower & Griffin, 2011). Meanwhile, found that parents' volunteer efforts and attendance at school meetings had minor effects on students' math achievement (Núñez, Vallejo, Rosario, Tuero, & Valle, 2014).

Nevertheless, there is no clear consensus about how much parental help with homework (Van Voorhis, 2003) affects academic outcomes, despite the commonality of this practice. First, there is a concern over the effectiveness of assisting student learning, considering that scholars cannot consistently verify a positive association between the two variables (Cooper, Robinson, & Patall, 2006). Second, there needs to be a better understanding of the suitable amount of time and frequency required for homework (Draper, Gower, Huffington, & Whiffen, 2018). Third, there is a question over whether research projects are more relevant for improving performance and achievement than problem-solving exercises (Trautwein & Köller, 2003), and further, if they should be completed in school rather than at the student's home (Hoover-Dempsey et al., 2005). Fourth, scholars have deliberated about the amount of help that should be given to finishing homework. On this point, research suggests that unaided studying can be much more important for performance than homework, family involvement in learning (Draper et al., 2018), and the significance that parents attribute to homework (Fernández-Alonso, Suárez-Álvarez, & Muñiz, 2016).

To compound matters, the literature concerning parental homework help contains contradictory evidence. For instance, some research shows that parental involvement with homework has no effect on student achievement while other studies suggest that parental involvement may negatively effect student success (Evans, 2018; Khon, 2006a, 2006b). The recent studies done by Fernández-Alonso et al. (2016) have examined the link between student achievement and different homework-related variables like time spent, level of autonomy, an importance attributed to homework both student and the family. Kohn's (2006) conclude that the relationship between homework and academic achievement remains unclear. The latter authors attributed this ambiguity to the analysis and management of both variables, homework and academic achievement, within other factors that also affect performance and may be confounded by other factors.

Recent scholarship has striven to settle this ambiguity and establish a foundation for new research. For instance, Patall, Cooper, and Civey (2008) used a 14-study meta-analysis to address the relationship between parental involvement in school assignments and academic performance (Hoover-Dempsey et al., 2001). The authors found that such involvement can lead to: (1) higher rates of assignment completion; (2) fewer problems with completing the assignment; and, (3) in some cases, higher academic performance among primary students (Valle et al., 2015). A study run by Ruiz (2010) offered similar findings for Colombian students: Performance improved among children who received homework help from their parents. This meta-analysis of 22 additional studies saw a positive association between assistance with homework and performance among primary school students, but a negative association in the case of secondary school students. There was also a negative association for math achievement, while verbal areas showed positive results.

An even more recent meta-analysis synthesized 37 studies between 2000 and 2013 (Schereens, Witziers, & Steen, 2013) that encompassed kindergartens, primary and secondary schools. The authors found that the parental models most associated with high achievement are those focusing on supervised learning activities. The strongest relationships between type of parental involvement and academic achievement occurred when parents had high academic expectations for their children, maintained communication with them over school events and schoolwork, and promoted reading habits. This overlays with Sheldon and Epstein (2005) finding that parental involvement with reading tasks translated into significant improvements in language and reading skills from kindergarten to high school. By contrast, the analysis did not find much relationship between academic achievement and parents' homework supervision, attendance at school events, and control exerted over students' habits.

Despite the above ambiguity, scholars generally agree that help with homework effects a student's study habits, time management, accountability and other issues that indirectly affect academic performance (Cooper et al., 2006; Nokali, Nermeen, Bachman, & Votruba-Drzal, 2010). Other research has established a relationship between homework, achievement, and cognitive factors, like the studies by Brown, McBride, Bost, and Shin (2011); DeSpain, Conderman, and Gerzel-Short (2018); Hoang (2007); and Oyserman, Brickman, and Rhodes (2007); Pomerantz, Moorman, and Litwack (2007).

The findings of two specific studies are particularly relevant to this article: The first is UNESCO's First International Comparative Study (LLECE/UNESCO, 2001), which evaluated the performance of 3rd and 4th grade primary students in different Latin American countries. The second is the Spanish-American research on School Effectiveness (IIEE, in its Spanish acronym), which developed and validated a model to examine the effectiveness of Latin American school systems and schools (Murillo & Hernández-Castilla, 2011a, 2011b; Murillo, 2007). It is important to underline that the two studies differ in terms of how they construct and measure the factors associated with family involvement (McWayne, Melzi, Limlingan, & Schick, 2016).

The IIEE treated parental involvement as a form of overall involvement in the school, including curricular activities, non-curricular events, and organizational matters. The IIEE found that students' math and language performance increased significantly in cases of major parental involvement (Murillo, 2007). Interestingly, the IIEE confirmed that the best-performing students are those who ask for parental help with their homework. More specifically, it found that (1) students who *received* the most parental help also showed lower achievement (because those students were the most academically behind), but (2) students who *asked* for more help performed better (perhaps because they were more committed to their learning (Auerbach, 2012; Blanco & Rodríguez-Martínez, 2015; LLECE/UNESCO, 2001), meanwhile, derived two main findings: (a) A significant effect on language and math

performance among students whose parents regularly read to them at home and (b) A negative correlation between performance and help with homework, resulting in lower achievement for students who received parental help with homework.

Method

This study aimed to determine the effect of family involvement on student performance. Specifically, we explored the diverse forms of parental involvement in school activities (i.e., group or individual meetings, as well as institutional and extra-curricular activities) and their relationship to helping a child with homework.

We utilized data from the Second Regional Comparative and Explanatory Study (SERCE), conducted by UNESCO (LLECE/UNESCO, 2008, 2012), to achieve the study's objectives. We were particularly interested in testing the IIEE's finding that the best-performing students were those who claim to receive parental help with their homework. The UNESCO survey applied standardized tests to approximately 200,000 students in 16 countries, as well as distributed questionnaires to their families, teachers, and school administration. The survey mainly focused on math and literature. We applied four-level multilevel models (student, classroom, school, and country) to the collected data[1] .

Our analysis is grounded on the concept of *value added,* that is, an estimation about the contributions to student's test scores made by the school. It provides an accurate estimate of what each individual school contributes to student learning. To analyse the effect that different types of family involvement have on student performance, we controlled for certain external factor such the family's socio-economic and education level; years of education prior to primary school; native language; and whether the student's home was urban or rural. We used this data to derive and control for adjustment variables that could influence the data output.

Participants

Our sample was drawn from the population of all 3rd grade (8 and 9 years of age) and 6th grade (11 and 12 years of age) primary education students in Latin America; this totalled approximately 10 million boys and girls in the region. The sample itself covered 2,809 schools located in 16 Latin American countries, from which we derived 90,300 3rd graders from 4,092 classrooms and 86,362, 6rd graders from 3,683 classrooms (Table 1). To establish the exact sample, a stratified random sampling was used by UNESCO with the following criteria: type of administration and geographic area (public and private schools in rural and urban areas); institution size (small: one class per grade; medium: two or three classes per grade; large: four or more classes per grade), and the relationship between 6th and 3rd grade enrolment ($R6/3 \geq 0.8$; $0 < R6/3 < 0.8$; $R6/3 = 0$; and 3rd grade enrolment = 0). The sampled schools were selected at each level using a single-stage selection process from each cluster, and all students from that grade at the selected school were in the sample.

Variables

We classified the controls into three different groups: family involvement, academic development, and socio-demographics.

Family involvement variables

These included seven variables that were organized into two areas, depending on the data source and the variable type: (1) parental assistance with studying or homework, based on the student's opinion (dummy variables); and (2) family involvement in different school activities (school-organized extracurricular activities; meetings arranged by the schools' principals, teachers, or parent associations; and parent association elections) based on the parents' response. In both cases, respondents had three choices: *no, sometimes and always.*

Student performance variables

The UNESCO survey measured students' performance in math and literature using the Item Response Theory (ITR). The data had a mean of 500 and SD of 50. The survey administrators collected this information using standardized tests in the areas mentioned.

Adjustment variables

These were composed of six factors: (1) family and student socio-economic levels, based on the parents' professions and family possessions (typified); (2) family education level, based on the highest level of degree obtained by each parent (typified); (3) student gender (dummy variable); (4) student's native language, be it Spanish, Portuguese, or other (dummy); (5) years of pre-schooling acquired by student (number of years the student attended an education centre prior to entering the formal education system), and (6) environment, if residing in a rural or urban setting (dummy).

First, we created a "null model" without the control variables. Next, we added the adjustment variables in order to account for their influence over the null model. Our full model encompassed the variables in the null model alongside those adjustment variables that made a statistically significant contribution. This model served as the basis for the value added approach, since it accounted for the external factors that are relevant to student achievement.

Instruments

The LLECE/UNESCO survey collected the variables using data from the following four types of tests:

A questionnaire sent to the parents, containing 20 confidential questions about family possessions, their relationship with the student and school, and their overall satisfaction with the school.

A questionnaire for 3rd and 6th grade students (containing 20 and 40 questions respectively) that covered personal characteristics, family support, involvement in school activities, and students' opinions regarding these topics.

Standardized tests, validated for each country, that comprised different booklets for the purpose of collecting the output variables (in our case, math and reading performance). We assessed performance via two dimensions: curricular elements common to the region, and skills acquired for daily life. The test items were designed to evaluate the comprehensive use of the different codes and rules of each discipline assessed, with an emphasis on the ability to understand meaning and resolve everyday concerns.

Data analysis

Following data collection, we ran multilevel models with four levels of analysis. The procedure for each grade and product variable consisted of the following: (a) estimating the null model; (b) calculating the model with control variables; (c) including each of the explanatory variables individually in the adjusted model; and (d) expanding on the final model by including all variables. When the variable used is ordinal, it is modelled with a Poisson distribution. It is called a link function of level 1 (link function) to the transformation of the dependent variable of level 1 that is equated to a linear combination of the coefficients of the explanatory variables, by means of a Poisson transformation using the MLnWin1 program. This method, The IGLS algorithm (generalized

[1] https://unesdoc.unesco.org/ark:/48223/pf0000160659.

Table 1
Study sample: Number of schools, grades and students

Country	Schools	Grades		Students	
		3rd	6th	3rd	6th
Argentina	167	312	353	6663	6696
Brazil	157	252	245	5711	5456
Colombia	203	300	207	5902	6035
Costa Rica	171	180	150	5233	4766
Cuba	206	370	383	5293	5910
Chile	165	281	263	6136	7025
Ecuador	192	224	215	5349	5427
El Salvador	182	256	235	7474	6346
Guatemala	231	313	267	7095	5560
Nicaragua	205	289	250	6885	6789
Panama	155	294	247	6476	5655
Paraguay	209	234	208	5506	4839
Peru	165	238	243	4814	4701
Dominican R.	183	167	114	4554	4646
Uruguay	218	342	303	7209	6511
Total	*2809*	*4092*	*3683*	*90300*	*86362*

Source: independent presentation of SERCE data

least squares) has been used. The model that uses the MLwinN fixes the components of the variance in an initial value and maximizes the verisimilitude of the fixed coefficients (Generalized Square Minimes). Then, fixes the coefficients with their current values and maximizes the likelihood, until convergence is achieved. we estimated four multilevel models as shown below (one for each output variable):

$$y_{ijkl} = \beta_{0jkl} + \beta_{1jkl}NSE_{ijkl} + \beta_{2jkl}NCult_{ijkl} + \beta_{3jkl}Preesc_{ijkl} + \beta_{4jkl}Genero_{ijkl} + \beta_{5jkl}LM_{ijkl} + \beta_{6l}Hábitat_{kl} + \beta_{7jkl}Ap\_mad_{ijkl} + \beta_{8jkl}Ap\_pad_{ijkl} + \beta_{9jkl}part\_act_{ijkl} + \beta_{10jkl}par\_reu\_prof_{ijkl} + \beta_{11jkl}par\_reu\_dir_{ijkl} + \beta_{12jkl}par\_reu\_as_{ijkl} + \beta_{13jkl}par\_elec\_as_{ijkl} + \varepsilon_{ijkl}$$

$$\beta_{0jkl} = \beta_0 + \varphi_{0l} + \upsilon_{0kl} + \mu_{0jkl}$$

$$\beta_{1jkl} = \beta_1 + \varphi_{1l} + \upsilon_{1kl} + \mu_{1jkl}$$

$$\beta_{5jkl} = \beta_5 + \varphi_{5l} + \upsilon_{5kl} + \mu_{5jkl}$$

$$\beta_{6l} = \beta_6 + \varphi_{6l}$$

$$\beta_{7jkl} = \beta_7 + \varphi_{7l} + \upsilon_{7kl} + \mu_{7jkl}$$

$$\beta_{13jkl} = \beta_{13} + \varphi_{13l} + \upsilon_{13kl} + \mu_{13jkl}$$

With:

$$\left[\varepsilon_{0ijkl}\right] \sim N\left(0, \Omega_\varepsilon\right) : \Omega_\varepsilon = \left\lfloor \sigma^2_{\varepsilon_0} \right\rfloor$$

$$\left[\mu_{0jkl}\right] \sim N\left(0, \Omega_\mu\right) : \Omega_\mu = \left\lfloor \sigma^2_{\mu_0} \right\rfloor$$

$$\left[\upsilon_{0kl}\right] \sim N\left(0, \Omega_\upsilon\right) : \Omega_\upsilon = \left\lfloor \sigma^2_{\upsilon_0} \right\rfloor$$

$$\left[\varphi_{0l}\right] \sim N\left(0, \Omega_\varphi\right) : \Omega_\varphi = \left\lfloor \sigma^2_{\varphi_0} \right\rfloor$$

Where i = student variables, j = classroom variables, k = school variables, and l = country variables:

$y_{ijkl,}$ represents the various measurements of the student's performance;

NSE_{ijkl} represents the socio-economic level of the student's family;

$NCult_{ijkl}$ represents the family's education level;

$Preschool_{ijkl}$ represents the student's years of preschool;

$Gender_{jkl}$ represents the student's gender;

LM_{ijkl} represents the student's native language, be it Spanish, Portuguese or other;

$Environ_{kl}$ represents the school's surrounding environment, be it urban or rural;

Ap_mad_{ijkl} represents mother's help with homework and studying;

Ap_pad_{ijkl} represents father's help with homework and studying;

Par_act_{ijkl} represents parental involvement in extracurricular activities;

$Par\_reu\_prof_{ijkl}$ represents parental involvement in teacher-organized meetings;

Par_reu_dirijkl represents parental involvement in meetings organized by the school directors;

Par_reu_asijkl represents involvement in meetings organized by parent associations; and

Par_elec_asijkl represents votes cast in elections for parent association representatives.

We should note that some respondents lacked complete information. The missing values were worked with SPSS, previously to be used in MLwiN software. We strove to maximize the sample by filling in the gaps with data from similar respondents (i.e., etc.). In the absence of this data, we used the value of a classmate that shared the same classroom, environment, and characteristics. It has been done by analysing the pattern data and using the mean of the series using this SPSS option. In a few unusual cases removed the respondent from the data analysis as the multilevel work demands.

Results

Level of family involvement in student learning

The data clearly indicate that parental involvement in the educational process and the school itself directly influences a student's academic achievement. The four-level multilevel modelling processes (one for each grade and product variable) reveal the effect that different forms of family involvement have on a child's learning progress (Tables 2–5): All but one variable showed a significant influence on the individual variable models (Table 2) for some level or product variable, while four of the seven variables exerted an influence in all cases.

We want to stress that the six variables used in the output conformed to the same pattern across the four models. The results show that, in both the 3rd and 6th grade, students'

Table 2
Multilevel model results for math performance 3rd grade

	Null model B (SE)	Fixed model B (SE)	Variable coefficients B (SE)	Final model B (SE)
Constants				
Intercept	505.65 (7.35)	514.91 (6.61)		500.76 (6.44)
NSE Family		3.00 (.40)		2.67 (.40)
Family Educational Level		14.82 (.47)		14.19 (.47)
Preschool Education		.93 (.23)		.81 (.23)
Gender (male-female)		−6.10 (.62)		−6.30 (.63)
Native Language (Spanish or other)		−21.89 (1.30)		−21.50 (.74)
Environment (urban/rural)		−13.66 (16.33)		−13.70 (1.62)
Mother's help with academic homework or studies			7.10 (.72)	5.50 (.76)
Father's help with academic homework or studies			5.09 (.63)	3.40 (.66)
Involvement in extracurricular activities			4.14 (.40)	3.35 (.41)
Involvement in meetings organized by school administration			1.92 (.42)	NS
Involvement in teacher-organized meetings			4.69 (.48)	3.76 (.48)
Involvement in meetings organized by parents' associations			NS	-
Involvement in parent association elections			3.31 (.73)	1.66 (.74)
Random Sampling				
Countries	2346.45	1873.04		1746.10
Schools	1823.70	1374.27		1338.58
Grades	524.39	495.42		489.74
Students	5630.78	5546.36		5528.53

Source: Prepared by Author

Table 3
Multilevel model results for reading performance 3rd grade

	Null model B (EE)	Adjusted model B (EE)	Variable coefficients B (EE)	Final model B (EE)
Constants				
Intercept	507.62 (7.47)	513.74 (6.67)		499.15 (6.54)
NSE Family		5.16 (.42)		4.81 (.42)
Family Educational Level		17.92 (.49)		17.23 (.49)
Preschool Education		1.23 (.24)		1.13 (.24)
Gender (male-female)		6.32 (.65)		6.09 (.64)
Native Language (Spanish or other)		−24.95 (1.36)		−24.49 (1.36)
Environment (urban-rural)		−27.00 (1.59)		−26.25 (1.58)
Mother's help with academic homework or studies			8.20 (.75)	7.08 (.79)
Father's help with academic homework or studies			4.09 (.66)	2.02 (.69)
Involvement in extracurricular activities			3.68 (.42)	3.19 (.43)
Involvement in meetings organized by school management			2.28 (.44)	NS
Involvement in teacher-organized meetings			5.29 (.50)	4.87 (.51)
Involvement in parent association meetings			NS	-
Involvement in parent association election meetings			1.63 (.77)	NS
Random Sampling				
Countries	2422.44	1912.29		1800.51
Schools	1973.76	1129.35		1085.59
Grades	582.24	523.62		514.06
Students	6269.45	6159.26		6141.94

Source: Prepared by author

performance in reading and math were affected by their socio-economic and education levels, native language, gender, years of preschool involvement, and living environment (rural/urban).

According to the results, four out of the five forms of parental involvement demonstrated a positive influence on students' achievement:

1) Parental help with homework and studying (both mother and father).
2) Involvement in extracurricular activities.
3) Involvement in meetings organized by school management.
4) Involvement in meetings organized by school teachers.

Meanwhile, family involvement in parent association meetings and elections showed little or no effect on student performance. In the following, we describe the specific results of each involvement type.

Parental help with homework and studying

Students who claimed to receive parental support with homework obtained:

- 3rd-grade students received 7.1 additional points (using a mean of 500 and a standard deviation of 50) in math if aided by the mother, 5.1 points if aided by the father, and 9.38 points if aided by both parents.
- 3rd-grade students received 8.2 additional points in reading if aided by the mother, 4.1 points if aided by the father, and 9.5 additional points if aided by both parents.
- 6th-grade students received 2.0 additional points in math if aided by the father, while assistance from the mother did not appear to affect these students' math performance.
- 6th-grade students received 2.5 additional points in reading if aided by the mother, 3.0 if aided by father, and 4.02 if aided by both parents.

Table 4
Multilevel model results for math performance 6th grade

	Null model B (EE)	Adjusted model B (EE)	Variable coefficients B (EE)	Final model B (EE)
Constants				
Intercept	498.91 (13.00)	531.00 (12.36)		521.26 (12.31)
NSE Family		2.51 (.41)		2.46 (.43)
Family Education Level		9.67 (.04)		9.52 (.40)
Preschool Education		2.01 (.23)		1.92 (.23)
Gender (male-female)		−7.57 (.63)		−7.64 (.63)
Native Language (Spanish or other)		−13.88 (1.63)		−13.68 (1.62)
Environment (urban-rural)		−20.78 (2.44)		−21.02 (2.43)
Mother's help on academic studies or homework			NS	-
Father's help on academic studies or homework			1.98 (.64)	1.58 (.64)
Involvement in extracurricular activities			2.48 (.41)	1.66 (.42)
Involvement in meetings organized by management			2.17 (.40)	NS
Involvement in teacher-organized meetings			5.26 (.50)	4.81 (.51)
Involvement in meetings organized by the parent association			NS	-
Involvement in parent association elections			NS	-
Random Sampling				
Countries	2673.24	2241.00		2213.28
Schools	2580.03	2076.24		257.36
Grades	587.71	567.69		562.43
Students	6426.26	6343.33		6333.07

Source: Prepared by Author

Table 5
Multilevel model results for reading performance 6th grade

	Null model B (EE)	Adjusted model B (EE)	Variable coefficients B (EE)	Final model B (EE)
Constant				
Intercept	498.05 (11.13)	538.89 (2.13)		
NSE Family		3.92 (.48)		
Family Education Level		11.29 (.40)		
Preschool Education		1.91 (.23)		
Gender (male-female)		5.53 (.63)		
Native Language (Spanish or other)		−20.18 (1.60)		
Environment (urban/rural)		−31.11 (2.13)		
Mother's help with academic studies or homework			2.54 (.69)	NS
Father's help with academic studies or homework			3.05 (.63)	2.68 (.63)
Involvement in extracurricular activities			1.60 (.40)	NS
Involvement in meetings organized by school management			2.08 (.40)	NS
Involvement in teacher-organized meetings			6.45 (.49)	6.35 (.49)
Involvement in parent association meetings			NS	-
Involvement in parent association elections			NS	-
Random Sampling				
Countries	1959.67	1515.43		1492.78
Schools	2334.37	1507.89		1497.43
Grades	419.71	383.37		375.70
Students	6296.43	6213.05		6198.50

Source: Prepared by Author based on SERCE data.

Remarkably, 3rd graders (both male and female) who received homework help from their mothers showed greater improvement than the rest of their peers. Meanwhile, paternal support was most valuable for 6th grade boys (11 and 12 years of age), in both math and reading. In light of these results, it is important to know how many students are receiving parental help with homework and schoolwork in each of the countries studied—this information is represented in Figures 1 and 2. Across all Latin American countries studied, 82.3% of 3rd grade and 71.3% of 6th grade primary school students claimed to have received their mother's help with homework, whereas 81.4% and 50.6% of the corresponding grades received their father's help. When broken down by country, we see that an especially large number of 3rd-grade students receive their mother's help: Over 90% of such students in Cuba, Panama, Chile and the Dominican Republic, and over 80% in the remaining Latin American countries, save for Guatemala and Uruguay. The amount of paternal support, by contrast, ranged from 48% (Uruguay) to 80% (Cuba), indicating that fathers, while still an important source of help, constitute a less frequently available resource compared to mothers.

Parental involvement at school

The results also highlight that parental involvement at school directly influences a child's progress. We considered three types of school involvement—extracurricular activities, management-organized meetings, and teacher-organized meetings—and all of them demonstrated major significance for both grades; however, the weight of each one varied.

Parental involvement in extracurricular activities

This variable exerted influence on the reading and math performance of both studied grade levels. Third-grade students whose parents participated in extracurricular activities showed 4.14 more

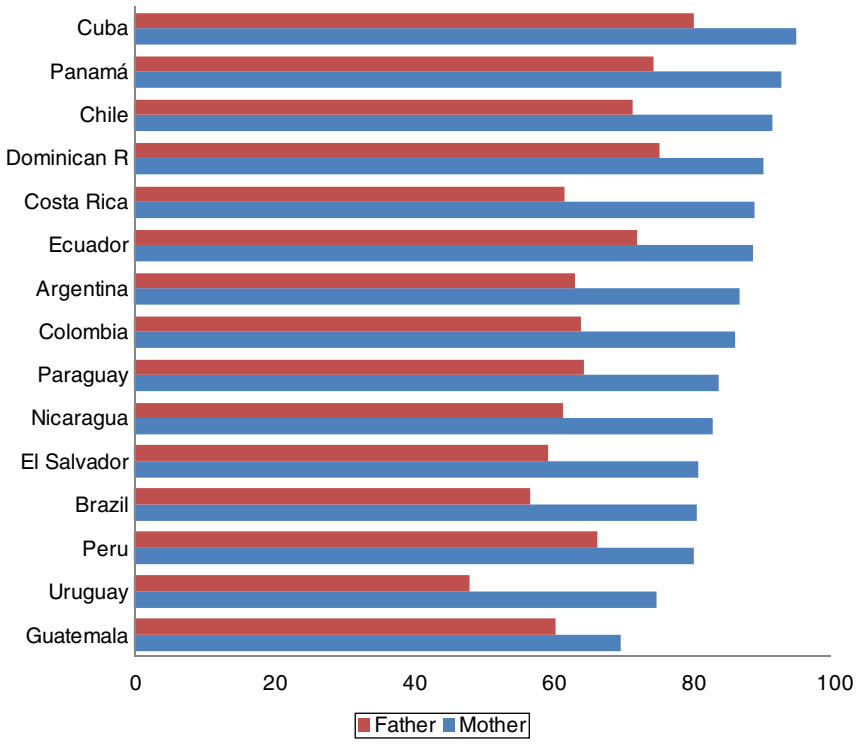

Figure 1. Percentage of parents who support child with homework and studies at home 3rd grade primary school students.

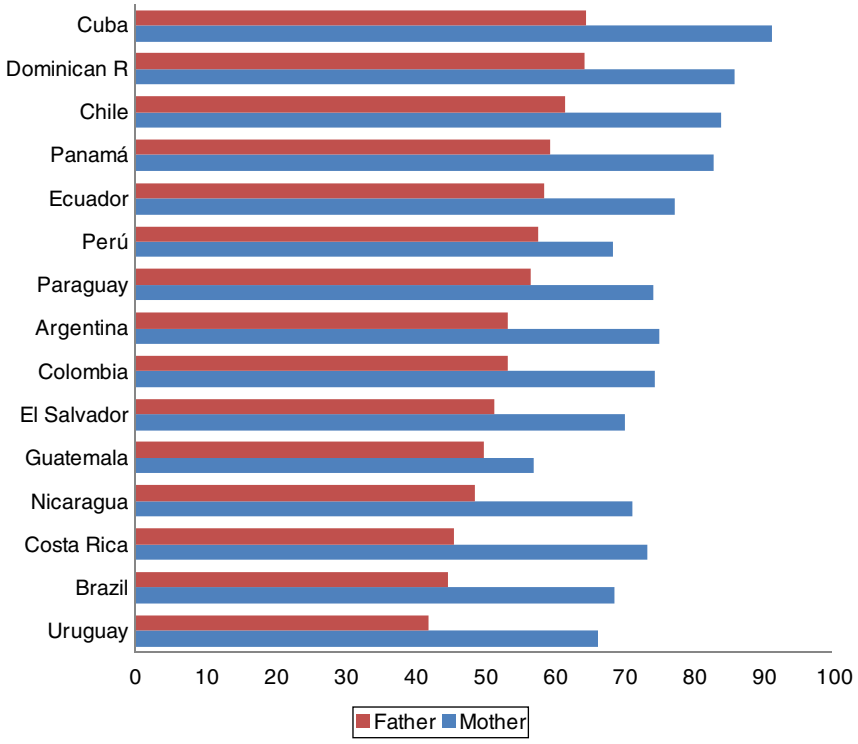

Figure 2. Percentage of parents who support child with homework of studies at home 6rh grade primary school students.

performance points in math (with a mean of 500 and a standard deviation of 50) and 3.68 more points in reading, whereas 6th-grade students showed 2.48 and 1.60 more performance points in math and reading, respectively. Evidently, this form of involvement has a greater influence on 3rd-grade students than 6th-grade students, and on math more than reading. The variable's importance is underscored by its appearance on three of the four final models.

Parental involvement in meetings organized by school management

This variable also showed a significant and positive effect on students' academic performance. According to the data, constant parental involvement in meetings organized by school leadership created a 3.84 point increase (1.94 if occasional involvement) and a

4.65 increase in 3rd-grade students' math and reading performance, respectively. Meanwhile, there was a 4.34 and a 4.16 point increase in 6th-grade students' math and reading performance, respectively. The effect of parental involvement in teacher-organized meetings was even stronger, increasing 3rd-grade students' performance by 9.38 points in math and 10.50 points in reading, whereas 6th-grade students' performance increased by 4.50 in math and 12.90 in reading. Even when controlling for all demographic variables (e.g., socio-economic level, gender, native language, etc.), students' performance increased by as much as a quarter of a standard deviation when parents expressed interest in attending teacher-organized meetings. Such findings confirm that family relationships are extremely important in a child's development.

Parental involvement in parent associations

From the two variables comprising this area (involvement in association meetings and parent association elections), only the latter appeared to correlate with academic performance, and that was specifically for 3rd-grade students. Nonetheless, the effect was significant, leading to a 3.26 and 6.62 increase in performance in reading and math, respectively. The final multilevel models, which included all variables simultaneously, allowed us to accurately compare performance variations between students from equal socio-demographic levels based on whether they received parental help with homework. For 3rd-grade students, the categorical data indicated a 26.44-point difference in math performance and a 25.22-point difference in reading performance (more than 0.5 standard deviations); for 6th-grade students, there was a difference of 14.52 points in math and 15.38 points in reading (0.3 standard deviations).

Discussion

Theoretical implications

The present study used an extensive sample of Latin American schools to explore the effect of different forms of parental involvement on primary school students' performance. At a broad level, family involvement with the school, and specifically with homework, was found to be the most relevant factor in the relation between schools and parents. The limitations of this study as a quantitative research could be completed with a qualitative perspective with interviews to let us know and understand the parent's perspective in deeper way. But also, to have a more accurate data about the time devoted to help the students as it seems not to be a linear relationship, maybe due to an excessive protection to the children that does

On a theoretical level, the present study disagrees with the finding observed in the first comparative study (LLECE/UNESCO, 2001): namely, that there is a negative relationship between homework support (Trask-Tate & Cunningham, 2010) and student performance. However, our results do underscore that the quality of learning experiences derives from social class, which influences the types of home experiences that children encounter. To illustrate, half of the parents becoming from working-class reported negative academic experiences for their children. These findings align with earlier studies on international contexts, and Latin America in particular (Murillo, 2007; Ruíz, 2010; Sheldon, 2003). Class division, as this and other studies have shown, is particularly pronounced during the preschool period. This reveals the inequalities associated with social class (Yamamoto, Holloway, & Suzuki, 2016) that are related with parental involvement and affect student academic performance.

It is worth adding that parents' involvement in extracurricular activities and administrator-organized meetings showed a positive relationship with student performance, but the size of the effect was weaker compared to the other variables. These findings are analogous to other studies like recently Houtenville and Smith (2008) for North American students. Likewise, a multilevel method by González and Jackon (2014) found that parental involvement significantly effects reading and mathematics in the average school (Lin & Yan, 2005).

The last form of parental involvement—namely, participation in organizations related to school management, such as parent associations or school boards—did not correlate with student performance in our study. Nonetheless, parental involvement in these boards or associations could benefit other areas of the student's life, such as their concentration on education and schooling, student rights, their responsibilities and duties as a citizen, etc., all of which are relevant for learning and school performance (Benner, Boyle, & Sadler, 2016).

Practical implications

For 3rd-grade students, having a mother's help with homework was particularly significant for both reading and math performance (producing 8 and 7 more points, respectively, then those who did not receive maternal backing). Curiously, parental assistance had considerably less effect for 6th-grade students, producing only 2 to 2.5 additional points depending on the subject and parent's gender. Regardless, the results generally align with other studies that highlight the relationships between mothers' involvement in their children's education and said children's emotional success, capital, and wellbeing (Yamamoto et al., 2016).

Beyond helping with homework, parents' involvement in parent-teacher meetings also showed a positive effect on student performance across both subjects and both grade levels. Sixth-grade students showed the greatest gain in reading performance, with an increase of 6.5 points in their scores. This seems sensible, since parent-teacher meetings frequently address issues and problems directly related to the learning process or student behaviour, thus building shared support and control strategies between parents and schools that positively influence the student's performance. Secondly, regular meetings between teachers and parents that address student learning may be used to guide parents in providing more effective support. It is important to mention that, regardless of the type of parental involvement, the effect was always greater in reading than math for both grades. This merely serves to confirm the stronger influence that family has traditionally had on language and communication studies versus math and science studies (Murillo, 2007).

The literature shows as the most robust predictive effects of parenting resumed after inclusion of the collaboration term of parenting by family processes, which lends care to the conditionality of parenting with a moderate effect of family processes. This shows that parenting tasks are more relevant in the home environment with low positive family processes and shows merging in the family context of highly positive family processes (Yeung, Chen, & Choi, 2017).

The present research sought to determine the type(s) of family involvement that schools could promote in order to facilitate strong, long-term alliances as García (2003) refers. Secondly, parents and teachers should be encouraged to engage in regular meetings to address student learning Chavkin (2017). Relatedly, the evidence suggests that teachers cannot simply assign homework; rather, they are most effective in their role when they convey the meaning behind the task, as well as provide support and collaboration strategies between school and home. By organizing

meetings with parents, teachers may be able to accomplish these goals

Conclusion

Overall, schools should recognize that parents are students' most influential partners in the learning process. Indeed, in our study, a large majority of the children reported receiving support from home when studying and doing homework. As such, teachers should trust students' families and coordinate with them, as best they are able, in order to earn their support. By collaborating with families, schools may better achieve their mission of enhancing student learning

The fact that the support of families in school duties positively influences us raises a question about the role of the school. Undoubtedly, families must be counted, but families cannot be a way of schooling. It is not their paper. On the other hand, the fact that their support is key in the tasks makes question what the role of the school is itself, and on the other hand could be an element of social justice. Not all families have the knowledge, nor the time, to carry out this systematic support in school tasks at home, and therefore, it can become a new source of inequality of learning opportunities.

In the future, scholars should focus on the relationship between social class and parental support, as well as apply qualitative methods (e.g., focus groups, observations) to develop a more holistic comprehension of the phenomenon. Further studies should explore the relations between parents' socio-cultural level and the role(s) they assume in the school and community contexts (Talani & Branco, 2018).

The creation of a strong relationship among family and school has been shown as a key factor in the pleasant development of the education process and in achievement success. The relation has been branded by a mutual responsibility between school agents and students' families and it is far from the expected, particularly in the context of many Latina American countries.

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