Academic Performance in 1st and 3rd Grade: A Predictive Study

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Abstract

The early years of elementary school are essential for improving social and academic skills. This study aimed to predict academic performance in the 3rd year of elementary school based on school stressors, social skills and behavior problems, and academic performance in the 1st year and verify changes and stability of the investigated variables from the 1st to the 3rd year and associations. The study included 43 1st–year students with an average age of six years and 3rd–year eight-year-olds, and eight 1st–year teachers and seven 3rd–year teachers. The research was carried out in public schools in the interior of São Paulo. The following instruments were adopted: *Provinha Brasil*, Inventory of School Stressors, and Social Skills Rating System (SSRS–BR). School stressors and academic performance in the 1st year were predictors of academic performance in the 3rd year. Students showed gains in academic performance and social skills, and reduction in behavior problems, with significant associations between variables. Predictive studies contribute to the development of prevention programs.

Keywords: elementary school, academic achievement, literacy, social skills, behavior problems

DESEMPENHO ACADÊMICO NO PRIMEIRO E TERCEIRO ANOS ESCOLARES: UM ESTUDO PREDITIVO

Resumo

Os anos iniciais do ensino fundamental são essenciais para o aprimoramento de habilidades sociais e acadêmicas. Este estudo teve como objetivos predizer o desempenho acadêmico no terceiro ano do ensino fundamental com base em estressores escolares, habilidades sociais e problemas de comportamento e desempenho acadêmico no primeiro ano e verificar mudanças e estabilidades das variáveis investigadas do primeiro para o terceiro ano e associações. Participaram do estudo 43 alunos do primeiro ano, com média de idade de 6 anos, e do terceiro ano, com média de 8 anos de idade, e oito professores do primeiro ano e sete do terceiro ano. A pesquisa foi realizada em escolas públicas do interior paulista. Adotaram-se os seguintes instrumentos: Provinha Brasil, Inventário de Estressores Escolares e *Social Skills Rating System* (SSRS–BR). Estressores escolares e desempenho acadêmico no primeiro ano foram preditores do desempenho acadêmico no terceiro. Os alunos apresentaram ganhos em desempenho acadêmico, habilidades sociais e redução de problemas de comportamento, com associações significativas entre as variáveis. Estudos preditivos contribuem para elaboração de programas de prevenção.

Palavras–chave: ensino fundamental, desempenho acadêmico, alfabetização, habilidades sociais, problemas de comportamento

RENDIMIENTO ACADÉMICO EN EL PRIMER Y TERCER GRADOS ESCOLAR: UN ESTUDIO PREDICTIVO

Resumen

Los primeros años de la escuela primaria son esenciales para mejorar las habilidades sociales y académicas. Este estudio tuvo como objetivo predecir el rendimiento académico en el tercer año de la escuela primaria a partir de los estresores escolares, las habilidades sociales y los problemas de conducta y el rendimiento académico en el primer año, y verificar los cambios y la estabilidad de las variables investigadas del primer al tercer año y asociaciones. El estudio incluyó a 43 estudiantes del primer año con una edad promedio de 6 años y del tercero de 8 años, y ocho maestros de primer año y siete maestros de tercer año. La investigación se llevó a cabo en escuelas públicas del interior de São Paulo. Fueron adoptados los siguientes instrumentos: *Provinha Brasil*, Inventario de Estresores Escolares y *Social Skills Rating System*. Los estresores escolares y el rendimiento académico en el primer año fueron predictores del rendimiento académico en el tercero. Los estudiantes mostraron mejoras en el rendimiento académico, las habilidades sociales y la reducción del comportamiento problemático, con asociaciones significativas entre las variables. Los estudios predictivos contribuyen al desarrollo de programas de prevención.

Palabras clave: escuela primaria, rendimiento académico, alfabetización, habilidades sociales, problemas de comportamiento

The school directly influences child development because it is a context of learning, culturally accumulated knowledge, and socialization. School experiences, especially the early years of elementary school, are essential for improving academic and behavioral skills and promoting citizenship development, preparing children to access the adult world (Elias & Amaral, 2016; Correia-Zanini et al., 2016). The school is an essential microsystem for student development. According to the Bioecological Theory of Human Development, a microsystem is an immediate context in which individuals play an active role and promote their development (Leme et al., 2015; Koller et al., 2020).

Documents concerning Brazilian education indicate the importance of primary education, as it is a phase when vital developmental milestones are achieved, which influence the relationship a child establishes with themselves, their peers, and the world. The Brazilian National Curriculum Guidelines for School Education indicate that children start improving their autonomy, interaction with the environment, and relationship with various languages (writing and mathematics) in the early elementary school years, which enables them to participate in the literate world (Brasil, 2017). The National Common Curriculum Base (*Base Nacional Comum Curricular* [BNCC]) establishes that literacy must occur in the first three years of elementary school, providing students with multiple opportunities to become familiar and fluent with writing, develop reading skills, and become involved in literacy actions. Hence, children are expected to be literate by the 3rd grade (Brasil, 2017). Even though universal access to elementary school is granted in Brazil, merely having access to education does not ensure the acquisition of knowledge, as there are still many illiterate children. Furthermore, reading skills are essential for later school years to enable students to play an active role in their cultural and social contexts (Schmidt & Aguiar, 2016).

Given the importance of the early years of primary education in students' lives, much attention has focused on the factors that influence this trajectory. Academic performance is one indicator of school adjustment during childhood (Fernandes et al., 2018). It is considered the students' ability to express knowledge acquired during schooling, representing their academic performance and revealing their development resources and skills to interact with the environment. Academic performance is multidetermined and involves the characteristics of students, their families, schools, and sociocultural, political, and economic characteristics (Fernandes et al., 2018).

Poor academic performance characterizes a production below the expected for a student's age and school grade (Fernandes et al., 2018). It has been a concern in Brazil because it is associated with school failure and dropout (Pozzobon et al., 2017). The negative assessments of one's social competence on the part of teachers, peers, and parents (Leme et al., 2015) and poor self-concept concerning productivity (Elias & Amaral, 2016) negatively impact the development of the student. Prediction research has shown that academic performance predicts variables such as failure history, social skills (SS), perception of social support provided by teachers (Fernandes et al., 2018), intelligence (Ribeiro & Freitas, 2018), assertiveness, school stressors (Jovarini et al., 2018), and sex (Correia-Zanini et al., 2016).

Assessments of academic performance indicate whether students have successfully appropriated the learning processes offered by institutions. According to the National Institute of

Educational Studies and Research Anísio Teixeira (Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, 2016), there must be an association between literacy levels (reading and writing), and it is considered the process of acquiring the alphabetic writing system and literacy. Some public policies assess academic performance in school education to verify the students' development and whether schools comply with the educational policies implemented by the Ministry of Education. For example, *Provinha Brasil* is an instrument implemented in the Brazilian territory to assess the literacy levels of 2nd–grade students, verify the quality of education, and promote improved quality of education, decreasing inequalities (Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, 2016).

As reported in the literature, there are variables that positively influence academic performance, such as SS (Freitas et al., 2018), which are behaviors valued in a given culture that collaborate with the quality of peer interaction, increasing the likelihood of favorable outcomes for an individual, group, and community (Leme et al., 2015). Among the different classes of SS (independent and complementary), seven are relevant for the children's interpersonal development: self-control and emotional expressiveness, civility, empathy, assertiveness, interpersonal problem-solving capacity, making friends, and academic SS (Leme et al., 2015). A study reports that lags in social responsibility skills, self-control, and civility predicted behavior problems (Casali-Robalinho et al., 2015).

According to Gresham (2015), in recent years, researchers, educators, and public policymakers have focused on evaluations (for characterization and comprehension) and the development of interventions to promote SS in the school context. In addition, because of the scientifically proven relevance of SS, Brazilian pedagogical and political projects have addressed these skills, which are also included in the BNCC guidelines (Brasil, 2017).

At the same time, some variables positively influence academic trajectory and performance, while others exert a negative influence, such as problem behaviors and school stressors. Problem behaviors include behavioral excess or deficits that harm a child's social interactions, classified as internalizing and externalizing problems (Freitas et al., 2018). According to the literature, academic performance is negatively associated with behavior problems, whether externalizing (aggressiveness, hyperactivity, antisocial behaviors, impulsiveness, and opposition) or internalizing problems (anxiety, fear, and withdrawal) (Elias & Amaral, 2016). Studies show that problem behaviors tend to decrease as schooling years advance (Gardinal-Pizato et al., 2014), indicating that gender, SS, and problem behavior predict future problem behaviors (Mariano & Bolsoni-Silva, 2018).

School stressors, also called daily hassles, are school's demands or requirements that irritate, frustrate or disturb a child, harming their physical and emotional well-being (Fernández-Baena et al., 2015). These demands are characterized as difficulties in relationships established with peers and teachers, the student's role, and the school-family relationship (Marturano et al., 2009). Marturano and Pizato (2015) addressed 248 children attending the 3rd grade in four public schools in a city in the interior of São Paulo. The objective was to test a predictive model of academic performance among 5th–grade students with the following predictive variables: academic performance, SS, problem behaviors, and perception of school stressors in the 3rd grade. The results indicated that school stressors during the 3rd grade predicted negative academic performance in the 5th grade, while SS were positive predictors.

Perception of school stressors during primary education might be related to academic demands, such as pressure for results, which leads to behavior problems and cause anxiety in the long term, predicting poor academic performance (Correia–Zanini et al., 2016).

Given the previous discussion, this study's objective was to predict the academic performance of 3rd graders, considering school stressors, SS, behavior problems, and 1st–year academic performance and verify whether these variables remained stable or changed from the 1st to the 3rd grade and potential associations. Such information is expected to contribute to existing and future public policies focused on all the actors composing the school and family microsystems.

Method

This quantitative, longitudinal, and predictive study with repeated measures was conducted in a town in the east of São Paulo, with approximately 89,000 inhabitants, with Human Development Index (HDI) of .797, and 46 public and 21 private schools. Four municipal public schools took part in the study's first phase (data collected in the last two months of 2017), and three schools participated in the second phase (data collected in the last two months of 2019).

Participants

Forty–three students (18 boys and 25 girls) attending four municipal elementary schools were assessed at two different points in time: 1st grade (6.9 years old on average; SD = .3) and 3rd grade (8.8 years old on average; SD = 3.7). In addition, eight 1st–grade teachers aged 42 on average (SD = 7.3) and seven 3rd–grade teachers (six women and one man) aged 40.7 on average (SD = 11.74) participated in the study.

Instruments

- *Provinha Brasil* (Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, 2016): it is intended to assess the literacy level of children attending Brazilian public schools at the beginning and end of the 2nd grade. It comprises 24 multiple-choice questions arranged in ascending order of skills requirement. The results are classified into five levels, according to the number of correct answers: level 1 – from 0 to 10; level 2 – from 11 to 15; level 3 – from 16 to 18; level 4 – from 19 to 22; and level 5 – from 23 to 24.
- *Inventory of School Stressors* – ISS (Marturano et al., 2009): it was designed to investigate disturbing or irritating situations in the school context, assigned to four domains – school performance, family-school relationship, relationship with peers, and other demands of school life. It comprises 30 items, in which children report whether they experienced those situations and how upsetting they were. The bi–factorial structure proposed by Correira–Zanini et al. (2016) was used in this study: F1 – stressors related to the student's role (items 2, 8, 11, 15, 17, 21, 25, 27, and 29) concerning academic performance, family-school relationship, and relationship with the teacher; and F2 – stressors regarding interpersonal relationships (items 4, 5, 12, 16, 18, 19, 23, 24, 28, and

30), such as the relationships with adults and peers. F1 and F2 presented a Cronbach's alpha equal to .81 and .72, respectively, and both were considered satisfactory for this study.

- *Social Skills Rating System* (SSRS-BR) (Freitas & Del Prette, 2015): the teacher version was used in this study. The instrument comprises 45 items: 22 of SS (responsibility, self-control, assertiveness and social resourcefulness, cooperation, and affectivity), 14 of behavior problems (externalizing, internalizing, and hyperactivity), and 9 of academic competence. The measure of academic competence was not considered in this study. The teachers rated the frequency of items for each student on a three-point scale (never, sometimes, and very frequently) and the importance of each item on a three-point scale (not important, important, and critical). The internal consistency obtained for the global scale was an alpha equal to .94, and significant correlations were found for the total item score (between $r = .37$ and $r = .71$; $p < .01$); no item was eliminated (from $r = .52$ to $r = .81$; $p < .01$).

Data collection procedures

First, we contacted the Municipal Department of Education to present the project and obtain consent. The study was also submitted to the Research Ethics Committee of the Faculty of Philosophy, Sciences, and Letters of Ribeirão Preto. After approval, the schools' principals were contacted to make the arrangements necessary to implement the study and not disrupt the schools and students' routines. Next, we scheduled a meeting with the teachers, and, upon their acceptance, the Free and Informed Conset Form was presented. Then, the students' parents or legal guardians received a note attached to the students' notebook requesting authorization for their children to participate in the project, with a Free and Informed Consent Form. After the parents, legal guardians, and teachers provided their consent, the children's assessments were scheduled and conducted within the schools' premises during or after classes. An assent form was presented to the children before the instruments were applied, and then, the ISS was applied individually and the *Provinha Brasil,* in small groups. Approximately one hour was needed to apply the instruments to the children. Finally, the teachers completed the SSRS-BR and returned their answers on the scheduled date.

Data analysis

Statistical analyses were performed using Jeffreys's Amazing Statistics Program (JASP) (version 0.13.1), and the protocols of each instrument were corrected according to their specificities. Kurtosis and symmetry were assessed to verify the assumption of normality, and values up to 7 and 3, respectively, were considered acceptable. The Student's t test was used for repeated and paired samples to compare the 1st and 3rd grades. Associations between the variables were verified using Pearson correlations: correlations below .30 were considered weak, between .31 and .69, moderate, and above .70, strong correlations. Linear multiple regression analysis, enter method, was used to verify the predictive effect of the 1st-grade independent variables (school stressors, SS, and behavior

problems) on the dependent variable academic performance in the 3rd grade. In this method, all the independent variables are included only once and simultaneously in the multiple regression equation to analyze the contribution of each independent variable to the equation. The level of significance was set at 95% for all the analyses.

Ethical considerations

This study project was submitted to and approved by the Research Ethics Committee, in compliance with the Resolution No. 466/12 and 510/16 from the Brazilian National Health Council and Resolution No. 016/2000 from the Federal Psychology Council. The participants signed the Free and Informed Consent Form or the Assent Form.

<p style="text-align:center">Results</p>

The results are presented considering: 1. comparison of repeated measures and intragroup correlations; 2. correlations between the variables; and 3. prediction: multiple regression analysis for academic performance.

Comparison of repeated measures and intragroup correlations

Table 1 presents the results concerning the comparisons of the variables' means and *SD*: school stressors, SS, academic performance, and behavior problems in the 1st and 3rd grades.

Table 1

Comparisons and Correlations of the Repeated Measures – Intragroup (n = 43)

Variables	1st grade		3rd grade		t	r
	Mean	SD	Mean	SD		
School stressors concerning the student's role	9.2	6.2	9.1	5.5	.072	.35*
School stressors concerning interpersonal relationships	9.6	7.5	13.1	9.3	−2.302*	.39*
Academic performance	17.35	4.0	21.4	3.0	−7.294***	.51***
Total social skills	28.5	7.5	31.4	4.9	−2.699*	.43**
Responsibility	8.8	2.8	10.1	2.2	−3.458**	.59***
Self-control	9.7	3.7	10.8	3.5	−1.814	.40**
Assertiveness and social resourcefulness	6.3	2.1	7.3	2.3	−2.986**	.46**
Cooperation and effectiveness	3.6	1.6	3.9	2.0	−.817	.28
Total behavior problems	9.4	6.1	6.0	6.0	3.517**	.45**
Externalizing behaviors	4.1	3.3	2.7	3.1	2.709**	.50**
Internalizing behaviors	2.2	1.8	1.4	1.5	2.185*	−.01
Hyperactivity	3.0	2.0	1.8	1.9	4.067***	.50**

Note. SD = standard deviation; *t* = Student's *t* test; *r* = Pearson's correlation coefficient. Significance analyses between associations of variables: * values less than .30; ** moderate values between .30 and .69; *** strong values above .70.

Table 1 shows a significant increase in the means obtained in the 3rd grade compared to the 1st grade regarding school stressors concerning interpersonal relationship, academic performance, SS, responsibility, assertiveness, and social resourcefulness. The total behavior problems, externalizing and internalizing behavior problems, and hyperactivity measures showed significantly lower means. The means concerning self-control, cooperation, and affectivity did not present significant differences.

Additionally, Table 1 shows stability measures. When significant, the coefficient of correlation ranged from r = .35 (school stressors concerning the student's role) to r = .59 (responsibility), and all the associations were positive with moderate intensity. No significant stability was found for cooperation and affectivity (r = .28) or internalizing behavior problems (r = −.01).

Correlation between the variables

Regarding the correlations between the 1st-grade variables, academic performance was significantly and positively associated (moderate) with internalizing behavior problems (r = .40; p < .01) and negatively and weakly associated with school stressors concerning interpersonal relationships (r = −.30; p < .05).

Academic performance in the 3rd grade was significantly and positively (weakly) associated with total SS (r = .37; p < .05), moderate responsibility (r = .45; p < .001), self-control (r = .22; p < .01), assertiveness and social resourcefulness (r = .24; p < .01), and cooperation and affectivity (r = .23; p < .01) with weak correlations. Negative associations were found between academic performance and stressors concerning the student's role (r = −.23; p < .01), total externalizing and internalizing problems (r = −.168; p < .05), and hyperactivity (r = −.189; p < .05), with weak correlations.

Prediction: Analysis of multiple regression for academic performance

Table 2 presents the result concerning the analysis of regression for academic performance assessed in the 3rd grade, considering independent variables (predictors) school stressors, SS, and externalizing and internalizing behavior problems assessed in the 1st grade.

Table 2

Multiple Linear Regression Model for Predicting Academic Performance in the 3rd grade (n = 43)

Predictors assessed in the 1st grade	B	SE B	ß	t	p
School stressors concerning the student's role	−.136	.076	−.268	−1.789	.08
School stressors concerning interpersonal relationships	.157	.058	.380	2.725*	.01
Externalizing behaviors	.022	.201	.024	.110	.91
Internalizing behaviors	.416	.274	.256	1.517	.14
Social skills	.023	.126	.059	.186	.85
Academic performance	.329	.138	.401	2.382*	.02

Table 2

Multiple Linear Regression Model for Predicting Academic Performance in the 3rd grade (n = 43)

Predictors assessed in the 1st grade	B	SE B	ß	t	p
F$_{(7.42)}$ = 5.034; p < .001; total adjusted R² = .43					

Note. B = non-standard estimate; *SE* = standard error; ß = standardized estimate; *t* = statistic value; *p* = statistical significance; * = *p* significant; F = F test; R² = coefficient of determination.

According to Table 2, the predictive model was significant (F$_{(7.42)}$ = 5.034; p < .001), explaining 43% of the variance. School stressors concerning interpersonal relationships (ß = .380) and academic performance (ß = .401) assessed in the 1st grade were significant and positive predictors.

Discussion

This study's objective was to predict the academic performance of 3rd-grade students considering school stressors, SS, behavior problems, and academic performance in the 1st grade and verify whether the variables changed or remained stable from the 1st to the 3rd grade and potential associations.

Regarding the results of the comparisons between variables in the 1st and 3rd grades (repeated measures), when the children attended the 3rd grade, they presented lower means in school stressors concerning the student's role. The hypothesis is that the 1st grade is a time of ecological transition between preschool and primary school, in which students are more vulnerable due to new academic demands (Correia-Zanini et al., 2016). A significant difference with an increase in the 3rd grade was found regarding the repeated measures of school stressors concerning interpersonal relationships, which corroborates the literature (Correia-Zanini et al., 2016; Gardinal-Pizato et al., 2014). As schooling progresses, the way interpersonal relationships are established changes, demanding increasingly elaborated responses from the children's behavioral repertoire.

A significant improvement was found in the 3rd grade regarding total SS and responsibility, self-control, assertiveness and social resourcefulness, and academic performance. These results are in line with Grol and Andretta (2016), according to which these variables tend to improve over the years, contributing to children becoming more skillful, a resource that enables them to deal with academic demands. This progress results from cognitive development and educational practices adopted in various contexts, including schools (Leme et al., 2015). Regarding improved academic performance and the development of SS over time, this study shows that the school fulfilled its role, contributing to these students' integral formation. These results corroborate the literature, i.e., despite difficulties, schools fulfill their role of mediating knowledge and promoting the students' development (Elias & Amaral, 2016).

Another significant result in line with the literature (Gardinal-Pizato et al., 2014) concerns a decrease in externalizing behavior problems and hyperactivity from the 1st to the 3rd grade, as the children developed and acquired more resources to deal with daily problems.

Associations between the same variable at two different points in time showed no significant correlations only regarding SS and cooperation and internalizing behavior problems. However, the correlations for the remaining variables were significantly positive (weak and moderate). These results show that initial resources regarding SS were protective factors in the later years, showing the importance of preventive interventions.

Associations between the variables show that academic performance in the 1st grade was negatively associated with school stressors concerning interpersonal relationships. This is an expected result considering that stress factors might harm academic performance (Fernández-Baena et al., 2015; Marturano et al., 2009). Additionally, interpersonal relationships might positively influence academic performance because these relationships are protective factors for school-aged children. Good interpersonal relationships promote a proximal supportive relationship with peers, contributing to improved academic performance. Positive associations were found between total SS and responsibility, self-control, assertiveness, social resourcefulness, cooperation, and affectivity with academic performance in the 3rd grade, similarly to the results reported by Gardinal-Pizato et al. (2014). The results indicated that socially skillful behavior contributes to improved relationships with peers and teachers and greater commitment to meeting school demands (Correia-Zanini et al., 2016).

Regarding the prediction analyses, the first significant result concerned school stressors related to interpersonal relationships (in the 1st grade) predicting academic performance (in the 3rd grade), i.e., higher stress levels predicted improved performance. The hypothesis is that as students develop and school advances they become more sensitive to the environment and perceive stress factors, using their resources to cope with the situations and preventing them from harming their performance. Furthermore, such coping might be related to the children's cognitive maturation, leading to a greater tendency to perceive stress in interpersonal relationships and the resources developed during this school period. Hence, it becomes apparent that the school microsystem supports this process, in which the teachers' mediating role and proximal relationships stand out as they promote the students' psychosocial development (Leme et al., 2015).

The regression model shows that academic performance in the 1st grade predicted academic performance in the 3rd grade. It was an expected result because students with good grades tend to maintain their performance as school advances, due to the consolidation of the knowledge already acquired and the acquisition of new knowledge involving all the previous stages (Gardinal-Pizato et al., 2014).

The results concerning the comparisons and prediction between the 1st and 3rd grades regarding academic performance highlight the need for public policies focused on 1st-grade students, especially those regarding teaching assessments intended to verify difficulties students may present in this period. SS (involving socioemotional skills, among other factors) promoted since the beginning of a child's educational process can work as protective factors in the coming years (Gresham, 2015; Correia-Zanini et al., 2016). The socioemotional skills are included in the BNCC as skills that need to be developed within the pedagogical curriculum in the school context, as they are essential for the development of students and future citizens. In this context, the importance of

existing national assessments (National Literacy Assessment [*Avaliação Nacional de Alfabetização*], *Provinha Brasil*, and *Prova Brasil*]) is highlighted as these emphasize the development of students and educational quality. However, the challenge of devising and implementing policies that support social and socioemotional skills development remains. It is a challenge because, within theoretical-practical concepts, social and cultural matters are central to SS, and Brazil is a country of continental proportions with considerable social and cultural differences. From this perspective, we must consider teacher training essential to develop the resources required in this context and to meet students' needs. It is not about a program but programs the teachers themselves can develop. In this sense, the teachers require continuous support. Law No. 13,935/2019 provides for a school psychologist and social worker in Brazilian schools to support the teachers in this endeavor.

Even though this study's results do not indicate that SS in the 1st grade predict academic performance in the 3rd grade, we cannot disregard the importance of promoting these skills among school-aged children. The reason is that the social repertoire acquired during childhood positively influences academic performance and reduces behavior problems (Elias & Amaral, 2016). Developing SS in early education can prevent future behavioral and emotional problems. The literature and results presented here suggest that various factors influence the development of school-aged children, especially factors concerning interpersonal relationships. This study focused on the school microsystem, but the importance of public policies directed to the family microsystem is stressed here because both microsystems are vital for child development and learning.

Final considerations

This study enabled an understanding of the factors that affect educational development during childhood and the factors that contribute to or harm learning. Because this is a study of a longitudinal nature, we verified changes between the 1st and 3rd grades and the factors predicting academic performance. The 3rd grade was chosen because, as previously mentioned, it is a time when students are expected to be literate and have their skills improved and developed to solve problems, establish interpersonal relationships, present fewer behavior problems, and perceive less intense stress in the school environment. Additionally, this study contributes to understanding the children's characteristics, promoting a reflection on the importance of developing SS during childhood, considering the importance of these skills for academic performance, and preventing mental health problems among children.

This study presents limitations, such as sample size, which hinders the generalization of results. In addition, the academic performance variable appeared as a moderating variable, that is, it could enhance or mitigate the remaining variables. However, an analysis to verify this situation still needs to be performed, which is a gap in this study. Regarding SS and behavior problems, these variables were based on the teachers' reports only, so that future studies are suggested.

Thus, this study shows the importance of considering changes in the early stages of primary education and contributes to a better understanding of the factors that influence literacy among children.

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