

Adaptive tasks: school transition from the 5th to 6th grade of elementary education

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Abstract

Within the ages of ten and thirteen years, children experience changes in elementary school. Focusing on students from public schools, the aim of this study was to investigate whether, from the 5th to 6th grade, they change indicators of performance, social skills, self-satisfaction and support network, self-concept and stress dimensions from one grade to another. A total of 379 students (212 girls), with a mean age of 10.6 years (SD = 0.91), participated at the beginning of the study. Instruments: Social Skills Assessment System; Child Stress Scale; Prova Brasil; Questionnaire for Self-Concept Evaluation; Multidimensional Scale of Life Satisfaction for Children. The results indicate a decrease in social skills, self-concept and life satisfaction; indicators of stress symptoms and academic performance increased from the 5th to 6th grade. The results are partially in agreement with previous findings of adverse effects of transition.

Keywords: school transition; elementary school; social skills; stress; academic performance

Tarefas Adaptativas: Transição Escolar do 5º para o 6º Ano do Ensino Fundamental

Resumo

No período entre dez e treze anos, as crianças vivenciam mudança de ciclos no ensino fundamental. Focalizando alunos de escolas públicas, este estudo objetivou investigar se, na passagem do 5º para o 6º ano, mudam de uma série para outros indicadores de desempenho, habilidades sociais, satisfação com o *self* e a rede de apoio, dimensões do autoconceito e estresse. Participaram 379 alunos (212 meninas), com idade média de 10,6 anos (DP = 0,91) no início da pesquisa. Instrumentos: Sistema de Avaliação de Habilidades Sociais; Escala de *Stress* Infantil; Prova Brasil; Questionário para Avaliação do Autoconceito; Escala Multidimensional de Satisfação de Vida para Crianças. Os resultados indicam diminuição em habilidades sociais, autoconceito e satisfação com a vida; indicadores de sintomas de estresse e desempenho acadêmico tiveram aumento do 5º para o 6º ano. A configuração dos resultados se alinha parcialmente às evidências prévias de algum efeito adverso da transição.

Palavras-chave: transição escolar, ensino fundamental, habilidades sociais, estresse, desempenho acadêmico

Tareas Adaptativas: Transición Escolar del 5º para el 6º Año de la Enseñanza Fundamental

Resumen

En el período entre diez y trece años los niños experimentan cambio de ciclos en la Enseñanza Fundamental. En el caso de los alumnos de escuelas públicas, este estudio tuvo como objetivo investigar si, en el paso del 5º al 6º año, cambian de una serie a otros indicadores de desempeño, habilidades sociales, satisfacción con el *self* y la red de apoyo, dimensiones del autoconceito y estrés. Participaron 379 alumnos (212 niñas), con una edad media de 10,6 años (DP = 0,91) al inicio de la investigación. Instrumentos: Sistema de Evaluación de Habilidades Sociales; Escala de estrés infantil; Prueba Brasil; Cuestionario para la evaluación del autoconceito; Escala multidimensional de satisfacción de la vida para los niños. Los resultados indican disminución en habilidades sociales, autoconceito y satisfacción con la vida; los indicadores de síntomas de estrés y desempeño académico tuvieron aumento del 5º para el 6º año. La configuración de los resultados se alía parcialmente a las evidencias previas de algún efecto adverso de la transición.

Palabras clave: transición escolar; enseñanza fundamental; habilidades sociales; estrés; desempeño académico

Introduction

Within the ages of ten to thirteen years, the child undergoes substantial physical and cognitive changes. The beginning of puberty, associated with the emergence of abstract thinking, often coincides with changes in interpersonal relationships involving family and peer

group (Lanson & Marcotte, 2012). In addition to physical, cognitive and interpersonal changes, many children experience transition from elementary school (ES) to middle school (MS).

In many education systems, including the Brazilian system, transition from the first to the second stage of school occurs between the 5th and 6th grade

and includes the transition from a loosely structured content to a highly structured one. The organization alchanges from one or two teacher classroom situation to a multi-teacher system taking turns in the class along the day may result in less chances of bonding between the teens and their teachers. When students change schools concomitantly with school grade transition, the social network among classmates may be affected. In Brazil, it is common to change schools when transitioning from the 5th to 6th grade. For example, in the state of Sao Paulo, approximately 22% of children are enrolled in state schools in the 5th grade against 58% in the 6th grade (INEP, 2019).

Given the many changes during transition between ES and MS, the question is whether and to what extent experience affects the academic, emotional, and interpersonal performance of children. In this article, the issue is addressed from a life transition perspective (Elias, 1989). According to Elias (1989), transition between school grades is understood as a set of demands that require adaptive effort in five domains or tasks: (a) adjustment to changes in role definitions and expected behaviors; (b) reestablishment of social networks; (c) reorganization of personal and social support resources; (d) development of cognitive reevaluation of daily life and anticipated actions; (e) dealing with stress associated with uncertainties.

The first adaptive task proposed in this conceptual framework is academic performance. Academic achievement can be observed in measures of performance. A decline academic performance during transition has been previously observed (Akos, Rose & Orthner, 2015; Chung, Elias & Schneider, 1998; Forrest, Bevans, Riley, Curly & Louis, 2013; Ryan, Shim & Makara, 2013; Shoshani & Slone, 2013). Using separate tests to assess math and native language, researchers have found that performance decreases either in math (Burchinal, Roberts, Zeisel, & Rowley, 2008) or in native language (Bélanger & Marcotte, 2013).

The second adaptive transition task, reestablishment of social networks, investigates the relationship of the child with peers. Investigating transition of 12-year-olds from elementary to middle school, Gregson, Tu, Erath and Pettit (2017) found that adolescent social skills influenced peer acceptance after transition, moderating the effects of parental guidance on peer acceptance. Oriol, Torres, Miranda, Bilbao and Ortúzar (2017) found that social support predicts school satisfaction during transition and peer support is more important than family support for children aged 10-12 years.

Malti, McDonald, Rubin, Rose-Krasnor and Booth-LaForce (2015) investigated the trajectories of aggressive behavior during transition between the 5th and 6th grades. Three trajectories of aggressive behavior were identified: stable low level of aggressiveness, increasing and decreasing aggressiveness. Understanding trust in friends differentiated increasing aggressiveness from decreasing and stable low level of aggressive behaviors, which suggests that a better understanding of friendship can protect aggressive adolescents during transition.

These results point to the third adaptive task of reorganizing personal and social support resources. Lanson and Marcotte (2012) conducted a three-year longitudinal study from the 6th grade to the second year of middle school to investigate perception of social support during transition. There was increased perception of support from friends between the first and last assessment as well as decreased perception of support from parents and teachers.

Cantin and Boivin (2004) also analyzed changes in the adolescent social network during transition from primary to secondary school. Social network characteristics were evaluated four times over two years starting at the end of the 6th grade. Transition had no negative impact on the quality of relationships. School transition was associated with an intensification of supportive relationships with school friends.

The adaptive task of reevaluating daily life and probably changing activities involves children's perception of context and of themselves during transition. Madjar and Cohen-Malayev (2016) investigated the impact of school transition on the educational environment perceived by adolescents by comparing the perceptions of students who made the transition at the end of 6th grade with those of students who did not have the transition experience. They found that students who transitioned reported a positive perception of the school environment prior to transition. This perception rapidly declined and became equal or lower than that of students who did not go through transition.

Research has suggested that self-perception declines during transition, with some exceptions. Coelho and Romão (2017) found a decrease not only in academic self-concept, but also in the social, emotional, physical and family dimensions from the 4th to 5th grade; Metsäpelto et al., (2017) found a decline in perceptions related to math performance during transition from the 6th to 7th grade. In contrast, there was no change in the students' overall self-concept (Chung et

al., 1998) or self-esteem towards the teacher (Ryan et al., 2013). Recently, in a longitudinal study from 8th to 12th grade, Modecki, Neira and Barber (2018) found that the decline in the global, social and academic dimensions of self-concept was a normative tendency in adolescence. This decline was more intense during school transition, but only among girls.

The last adaptive task examined by Elias (1989) was how dealing with stress associated with uncertainties of a new situation involves emotional reactions. Despite the importance of this adaptive domain, research is scarce. Chung et al., (1998) observed increased symptoms of stress. Lohaus, Elben, Ball and Klein-Hessling (2004) focused on stress experiences and did not find any changes associated with transition. Bélanger and Marcotte (2013) found gender differences in response to transition, that is, only girls presented increased depressive symptoms.

Regarding the background issue of the present study, the literature review indicates that transition between ES and MS seems to be associated with a decline in school performance and in the dimensions of self-concept. Regarding interpersonal and emotional aspects, the results are not clear due to the diversity or scarcity of studies focusing on the variables of interest. From the perspective of school transition as a life transition (Elias, 1989), research has hitherto favored adaptive tasks of adjusting to changes in role definitions and reevaluating one's own daily life over tasks of reestablishing social networks, reorganizing personal and social support resources and dealing with stress associated with the uncertainties of a situation.

Therefore, the interest is to broaden the focus of transition research to include not only performance and self-concept, but also emotional and interpersonal indicators. In addition to bridging the gap, a representative study of children's main adaptive responses to transition would be a step towards an integrated view of the processes involved, given the transactional relationships between the domains of adaptive functioning, such as the well-known positive association between social and emotional skills, academic performance, and school engagement (Orpinas, Raczynski, Peters, Colman & Bandalos, 2015; Primi, Santos, John & De Fruyt, 2016).

In an endeavor to contribute to broaden knowledge regarding the possible effects of transition between ES and MS, the aim of the present article was to investigate, when transitioning from the 5th to 6th grade, if the indicators of performance, social skills, self-satisfaction, support network, dimensions of self-concept and stress

change from one grade to another. These variables correspond approximately to the five adaptive tasks of the theoretical framework that underlies the study. Considering the differences for sex found in previous studies (Bellmore, 2011; Cantin & Boivin, 2004; Correia-Zanini & Marturano, 2016; Gao, Li, Zou, Cross, Bian, & Liu, 2015; Lipp, Arantes, Buriti, & Witzig, 2002; Malaspina & Rimm-Kaufman, 2008; Sebanc, Guimond, & Lutgen, 2014), the sex variable was included in the study. Based on empirical literature and the perspective of transition as a challenge that requires adaptive efforts, two working hypotheses were formulated: (a) the indicators of academic performance, social skills, self-concept and satisfaction with friendships, family and school would decrease in children; and (b) children would show increased symptoms of stress. The research is based on the view that studying transition should consider the child's perspective as an active participant in the whole process. In view of this, the child is an important participant in the investigation.

Method

Participants

This is a prospective study consisting of two stages of data collection, which were separated by an interval of 12 months. The first stage occurred in the 5th year and the second in the 6th year. A total of 379 children (212 girls) with a mean age of 10.6 years (SD = 0.91) participated in the two collections at the beginning of the research. The initial sample of 415 students from 5th grade classes in 15 elementary municipal schools in a city in the state of São Paulo were selected by the draw. The following year, the remaining participants (N = 379) transferred to six municipal and eight state schools.

Instruments

Social Skills Rating System – SSRS. It was developed and validated by Gresham and Elliott (1990) and validated by Freitas and Del Prette (2015) and designed for children and adolescents from the ages of three to 18 years. It has three versions: assessment by parents, assessment by teacher, and the student self-assessment version, which was used in this study. It consists of 20 Likert-type items ranging from zero to two points and divided into four dimensions: self-control, assertion, responsibility, and empathy. The confirmatory factor analysis (CFA) used in this study indicated the need to exclude the dimensions of self-control and assertion due to low

internal consistency. The following indices were obtained for the dimensions of responsibility and empathy: $\chi^2/df. = 2.700$, CFI = 0.908, GFI = 0.960, SRMR = 0.052, RMSEA = 0.067 and total alpha of 0.75.

Child Stress Scale – CSS. It was developed by Lucarelli and Lipp (1999) with the main objective of identifying with which frequency and intensity children, aged of 6-14 years, experience symptoms of stress. The scale consists of 35 Likert items, ranging from zero to four points, with four factors: physical reactions, psychological reactions, psychological reactions with depressive components and psychophysiological reactions. Based on CFA, two factors were maintained: psychological reactions with depressive components and psychophysiological reactions.; $\chi^2/df. = 1.776$, CFI = 0.930, GFI = 0.941, SRMR = 0.047, RMSEA = 0.045; total alpha of 0.83.

Prova Brasil (available at: <http://provinhabrasil.inep.gov.br>; accessed on 02/10/2014). The National Assessment of School Performance (Anresc), known as Prova Brasil, is part of the Basic Education Assessment System (INEP, 2019). The 56-item test with right/wrong options assesses notions of Portuguese and math. The score is the sum of all the correct answers, ranging from 0 to 28 in Portuguese, 0 to 28 in math, and from 0 to 56 for the total score.

Self-Description Questionnaire-SDQ1. It was developed by Marsh, Relich and Smith (1983) and adapted to the Brazilian context by Gardinal-Pizato (2010). It consists of 76 items and three subscales: global self-concept; academic self-concept (math, Portuguese and general school self-concept); non-academic self-concept (relationship with parents, friends, physical appearance and physical competence). The answer to each item was given by the participant on a four-point Likert scale. The CFA provided the following indices: $\chi^2/df. = 3.426$, CFI = 0.913, GFI = 0.972, RMSEA = 0.080, SRMR = 0.048 and alpha of 0.62 for the global dimension of self-concept; $\chi^2/df. = 2.780$, CFI = 0.904, GFI = 0.874, RMSEA = 0.069, SRMR = 0.056 and alpha of 0.88 for the dimension of academic self-concept; $\chi^2/df. = 1.779$, CFI = 0.908, GFI = 0.909, SRMSEA = 0.045, RMR = 0.054 and alpha of 0.86 for the non-academic self-concept. Total alpha was 0.90.

Multidimensional life satisfaction scale for children – MLSS-C. It was developed by Giacomoni and Hutz (2008). It contains 50 items divided into six factors: self, comparative self, nonviolence, family, friendship and school and rated on a five-point Likert-type response scale. The CFA indicated that the best

model should have five dimensions, excluding the non-violence factor; $\chi^2/df. = 1.927$, CFI = 0.906, GFI = 0.888, SRMR = 0.062 and RMSEA = 0.050 and total alpha of 0.86.

Procedures

After approval by the Research Ethics Committee of Faculty of Philosophy, Sciences and Letters at Ribeirão Preto (CAAE: 27855914.5.0000.5407), assessments were performed similarly on both data collections at schools during class time in three group sessions: 1st session: SSRS and MLSSC; 2nd session: CSS and SDQ1; 3rd session: *Prova Brasil* test. Each session lasted approximately one hour and 30 minutes. The first collection took place in August and September 2014 and the second from late July to September 2015.

Data analysis

We first conducted the analyses of the psychometric qualities of the instruments. The internal consistency for summary measures of the scales was estimated using Cronbach's alpha. The alpha coefficient ranges from 0 to 1 with ideal index values above 0.70; index values above 0.65 are considered acceptable and below 0.60 are unacceptable (Fachel & Camey, 2000). The CFA was used to test the theoretical structure of the instruments from the collected empirical data. The following indices were used to assess the quality of the structural model adjustment: $\chi^2 / g.l.$, *Goodness of Fit Index* (GFI), *Comparative Fit Index* (CFI), *Root Mean Square Error of Approximation* (RMSEA) and *Standardized Root Mean Square Residual* (SRMR) (Marôco, 2010; Schweizer, 2010).

Repeated measures ANOVA was used to compare the 5th and 6th grades with sex as a covariate factor. The ANOVA assumptions were confirmed by the Lilliefors corrected Kolmogorov-Smirnov test and the Mauchly test. The significance level was set at 0.05. In the evaluation of the order of magnitude, a small effect was considered if η_p^2 was ≤ 0.05 and $d \leq 0.2$; medium effect if η_p^2 ranged from 0.051 to 0.25 and d between 0.2 and 0.5; large effect if η_p^2 ranged between 0.26 and 0.50 and d between 0.50 and 1; very large if η_p^2 was > 0.50 and $d > 1$ (Cohen, 1992; Marôco, 2014).

Results

Table 1 shows the descriptive and inferential statistics of the total sample and by sex regarding social skills, academic performance, and stress symptoms in the 5th and 6th grades. For the social skill of responsibility and

cooperation, there was a decrease from the 5th to 6th grade with a medium effect size. Girls presented higher average than boys with a small effect size. The results indicated a significant effect of time with respect to empathy that decreased from the 5th to 6th grade. It was found that girls presented higher average than boys for this variable. In both results the effect size was medium. Regarding the effect of time on overall social skills, there was a decrease from 5th to 6th grade with a medium effect size. When comparing sex, girls presented a higher average with a medium effect size. There was no significant interaction between time and sex of children in the dimensions of responsibility and cooperation ($F(1,377) = 1.559$; $p = 0.213$; $\eta_p^2 = 0.004$), empathy ($F(1,377) = 2.626$; $p = 0.106$; $\eta_p^2 = 0.007$) or overall social skills ($F(1,377) = 3.363$; $p = 0.067$; $\eta_p^2 = 0.067$).

As for Portuguese, there was an increase in performance from the 5th to 6th grade. There were also differences for sex – girls presented a higher average than boys. There was an increase in performance

in math from 5th to 6th grade and differences for sex – boys presented higher average than girls. In the measure of overall academic performance, an increase was observed from the 5th to 6th grade, with no differences for sex. There was no interaction effect between time and sex for Portuguese ($F(1,377) = 0.030$; $p = 0.863$; $\eta_p^2 = 0.000$), math ($F(1,377) = 0.297$; $p = 0.586$; $\eta_p^2 = 0.001$) or overall academic performance ($F(1,377) = 0.238$; $p = 0.626$; $\eta_p^2 = 0.001$).

In the overall stress symptoms, there was an increase from the 5th to 6th grade and the girls presented a higher average than boys. There was no interaction effect between time and sex ($F(1,377) = 1.081$; $p = 0.299$; $\eta_p^2 = 0.003$).

Table 2 shows the results of the dimension of self-concept. There was a decrease in the general school self-concept from the 5th to 6th grade with a medium effect size. There was no difference between sex and no interaction effect between time and sex ($F(1,377) = 1.048$; $p = 0.307$; $\eta_p^2 = 0.003$). There was a decrease

Table 1.

Comparison of social skills, academic performance, and stress symptoms in grades 5 and 6 for the total sample and separately for boys and girls

Variable	Grade	Total sample N = 379				Boys n=167		Girls n=212		F	η_p^2
		M	SD	F	η_p^2	M	SD	M	SD		
Responsibility/ cooperation ¹²	5 th	1.50	0.39			1.45	0.44	1.54	0.34		
	6 th	1.34	0.45	42.01	0.10	1.26	0.48	1.41	0.41	9.57	0.02
Empathy ¹²	5 th	1.52	0.38			1.43	0.42	1.59	0.34		
	6 th	1.41	0.40	23.19	0.05	1.28	0.41	1.52	0.35	36.32	0.08
Overall social skills ¹²	5 th	1.51	0.32			1.44	0.35	1.56	0.28		
	6 th	1.38	0.34	50.57	0.11	1.27	0.35	1.47	0.31	32.54	0.07
Portuguese ¹²	5 th	13.58	4.94			12.87	4.80	14.13	4.99		
	6 th	15.37	5.38	46.21	0.10	14.62	5.32	15.97	5.37	7.93	0.00
Math ¹²	5 th	15.77	4.09			16.24	3.87	15.40	4.23		
	6 th	17.48	4.06	67.94	0.15	17.83	4.21	17.21	3.93	3.91	0.01
Overall academic performance ¹	5 th	29.37	8.11			29.17	7.69	29.53	8.44		
	6 th	32.86	8.28	80.93	0.17	32.45	8.63	33.18	8.00	0.51	0.00
Stress symptoms ¹²	5 th	1.10	0.66			0.97	0.59	1.20	0.69		
	6 th	1.26	0.73	20.74	0.05	1.10	0.70	1.40	0.72	18.97	0.04

Note. Statistically significant difference ($p < 0.05$) between groups: ¹for time; ²for sex

from the 5th to 6th grade in the Portuguese/verbal self-concept with a small effect size. Girls presented higher average than boys with a small effect size. There was no interaction between time and sex ($F(1,377) = 0.404$; $p = 0.525$; $\eta^2_p = 0.001$). There was a decrease in the self-concept in math from the 5th to 6th grade with a medium effect size. Boys presented a higher average with a small effect size. There was no interaction between time and sex ($F(1,377) = 1.031$; $p = 0.311$; $\eta^2_p = 0.003$).

Regarding the non-academic self-concept, there was a decrease from the 5th to 6th grade in all subscales with a small effect size. Boys presented higher averages in the physical competence subscale with a medium effect size. There was no interaction effect between time and sex on physical appearance ($F(1,377) = 0.087$; $p = 0.768$; $\eta^2_p = 0.000$), physical competence ($F(1,377) = 1.777$; $p = 0.183$; $\eta^2_p = 0.005$), relationship with parents ($F(1,377) = 0.122$; $p = 0.727$; $\eta^2_p = 0.000$) and

relationship with friends ($F(1,377) = 0.047$; $p = 0.829$; $\eta^2_p = 0.000$).

For the overall self-concept, there was a decrease from the 5th to 6th grade with a small effect size. There were no differences for sex or an interaction effect ($F(1,377) = 0.291$; $p = 0.590$; $\eta^2_p = 0.001$). As for the overall self-concept, there was a decrease from the 5th to 6th grade with a medium effect size. Boys presented a higher average than girls with a small effect size. There was no interaction between time and sex ($F(1,377) = 0.175$; $p = 0.676$; $\eta^2_p = 0.000$).

The results regarding life satisfaction are shown in Table 3. There was a decrease between the 5th and 6th grades, except for satisfaction with friendships.

A medium effect size was only found for school-related outcomes. For all other results, a small effect size was found. When comparing sex, girls presented a higher average than boys in satisfaction with self,

Table 2.

Comparison of self-concept in the 5th and 6th grade for the total sample and separately for boys and girls

Variable	Grade	Total sample N = 379				Boys (n=167)		Girls (n=212)		F	η^2_p
		M	SD	F	η^2_p	M	SD	M	SD		
General schoolself-concept ¹	5 th	3.12	0.62			3.06	0.60	3.17	0.64		
	6 th	2.80	0.71	69.07	0.15	2.78	0.72	2.82	0.70	1.49	0.00
Portuguese/verbalself-concept ¹²	5 th	3.07	0.66			2.96	0.72	3.15	0.59		
	6 th	2.94	0.75	9.43	0.02	2.86	0.76	3.01	0.71	8.27	0.02
Math ¹²	5 th	3.21	0.67			3.37	0.61	3.09	0.69		
	6 th	2.93	0.77	48.75	0.11	3.04	0.76	2.85	0.77	14.26	0.03
Physical appearance ¹	5 th	3.39	0.60			3.42	0.59	3.37	0.62		
	6 th	3.25	0.69	14.30	0.03	3.30	0.65	3.22	0.72	1.27	0.00
Physical competence ¹²	5 th	3.14	0.60			3.43	0.50	2.91	0.58		
	6 th	3.02	0.68	6.01	0.01	3.35	0.57	2.75	0.63	118.35	0.23
Relationshipwith parents ¹	5 th	3.35	0.61			3.43	0.56	3.29	0.65		
	6 th	3.30	0.68	14.10	0.03	3.39	0.64	3.23	0.70	1.49	0.00
Relationshipwith friends ¹	5 th	3.20	0.56			3.24	0.56	3.17	0.56		
	6 th	3.11	0.57	8.44	0.02	3.16	0.57	3.08	0.58	2.17	0.00
Global ¹	5 th	3.48	0.44			3.48	0.46	3.48	0.43		
	6 th	3.41	0.49	6.01	0.01	3.40	0.51	3.42	0.47	0.06	0.00
Overall self-concept ¹²	5 th	3.23	0.36			3.28	0.37	3.19	0.35		
	6 th	3.08	0.42	51.31	0.12	3.14	0.42	3.03	0.41	8.83	0.02

Note. Statistically significant difference ($p < 0.05$) between groups: ¹for time; ²for sex

Table 3.

Comparison of life satisfaction in the 5th and 6th grade for the total sample and separately for boys and girls

Variable	Grade	Total sample N = 379				Boys (n=167)		Girls (n=212)		F	η_p^2
		M	SD	F	η_p^2	M	SD	M	SD		
Self ¹²	5 th	4.15	0.79			4.04	0.90	4.23	0.69		
	6 th	4.01	0.79	9.02	0.02	3.88	0.81	4.10	0.76	9.49	0.02
Comparative self ¹²	5 th	2.50	0.86			2.62	0.87	2.40	0.85		
	6 th	2.33	0.87	12.23	0.03	2.48	0.85	2.20	0.87	10.92	0.02
Friendship ²	5 th	4.16	0.70			4.06	0.77	4.24	0.62		
	6 th	4.10	0.69	3.00	0.00	3.95	0.74	4.21	0.62	14.53	0.03
Family ¹	5 th	4.47	0.74			4.42	0.82	4.51	0.66		
	6 th	4.37	0.70	5.25	0.01	4.34	0.70	4.40	0.69	1.22	0.00
School ¹²	5 th	3.91	0.82			3.71	0.93	4.06	0.69		
	6 th	3.51	0.87	68.44	0.15	3.32	0.91	3.65	0.81	22.44	0.05
Overall lifesatisfaction ¹²	5 th	3.79	0.49			3.74	0.58	3.84	0.40		
	6 th	3.62	0.45	33.13	0.08	3.56	0.47	3.67	0.42	7.54	0.02

Note. Statistically significant difference ($p < 0.05$) between groups: ¹for time; ²for sex

friendships, school and overall life satisfaction. Boys presented a higher average than girls in comparative self-satisfaction. There was no interaction between time and sex for the self ($F(1,377) = 0.108$, $p = 0.742$; $\eta_p^2 = 0.000$), comparative self ($F(1,377) = 0.453$; $p = 0.501$; $\eta_p^2 = 0.001$), friendship ($F(1,377) = 1.039$, $p = 0.309$; $\eta_p^2 = 0.003$), family ($F(1,377) = 0.130$; $p = 0.718$; $\eta_p^2 = 0.000$), school ($F(1,377) = 0.028$, $p = 0.868$; $\eta_p^2 = 0.000$) or overall life satisfaction ($F(1,377) = 0.002$; $p = 0.961$; $\eta_p^2 = 0.000$).

Discussion

The research reported in this article aimed to investigate whether indicators of performance, social skills, satisfaction with self and support network, dimensions of self-concept and stress, during transition from the 5th to 6th grade, change from one grade to another. In the mixed repeated measures ANOVA results, the hypotheses were partially confirmed as positive functioning indicators decreased (social skills, self-concept and life satisfaction), while stress symptoms increased. Only the performance in Prova Brasil did not follow this tendency as better results were observed in the 6th grade. No interaction effects were found for sex.

The results are partially in agreement with previous studies on the adverse effects of transition. The

improved performance in Portuguese and math is at odds with results from previous studies, since none of these studies reported increased performance after transition. If there is no evidence of performance improvement after transition in the literature (Akos et al., 2015; Burchinal et al., 2008; Chung et al., 1998; Forrest et al., 2013; Ryan et al., 2013; Shoshani & Slone, 2013), there is also no consensus on the adverse effects. In research evaluating performance based on the overall school average, reports of declining averages prevail (Chung et al., 1998; Ryan et al., 2013; Shoshani & Slone, 2013). Decreased performance in math, but not in reading, was found in research that analyzed the students' scores in the two subjects (Burchinal et al., 2008).

Bellmore (2011) found a continuous and gradual decrease in the average scores of students between the 4th and 8th grade. This last result suggests that the decrease observed between two moments – before and after transition – maybe associated with a developmental tendency of the adolescent years rather than with transition itself.

The results of this study, apparently atypical, are related to the assessment procedure chosen. Whereas school average scores or standardized tests with age norms were used in the revised research, the gross scores, without normalization, in the same test in the 5th and 6th grades were used in the present investigation.

This procedure, in addition to favoring a better result in the second assessment by repeating the test, does not stipulate different norms according to the school grade. However, the advantage is to highlight each student's real learning gains from the 5th to 6th grade. The results of normative assessment provide different information. They indicate the child's position in relation to his or her class (or age group), and if there has been a change of position in transition. The assessment in the present study focuses on knowledge acquired from the last assessment, compares the absolute results of the 6th grade with the absolute results of the 5th grade and, indirectly, the positive role of the school during learning. It is noteworthy that the two types of assessment are not incompatible, but rather provide supplementary information, since one of them shows the students' progress in terms of acquired competence while the other shows the evolution of their relative position in the normative group.

This study found an increase in stress symptoms from the 5th to 6th grade regarding psychological reactions with a depressive component and overall stress symptoms. In other studies, either stress symptoms (Chung et al., 1998) or depressive symptoms were found to be increased (Lanson & Marcotte, 2012). In the only study in which stress reduction was found (Lohaus et al., 2004), the effect of reduction could be associated with school holidays, since post-transition assessment occurred immediately after school break.

Children reported decreased self-concept from the 5th to 6th grade in all the dimensions assessed. This result resembles those of Bellmore (2011) and of Coelho and Romão (2017), Metsäpelto et al., (2017) and Modecki et al., (2018). Lower self-concept is not necessarily a negative result. This may be due to cognitive development, which provides more realistic judgments and increased ability to make comparative assessments. In the elementary years, the decline in academic, social and global self-concept seems to be a normative trend (Modecki et al., 2018).

In the indicators of life satisfaction, there was a decline in the total score, which are consistent with the findings of Duineveld et al., (2017) who found a decline in quality of life assessment during transition from the 6th to 7th grade. The decreasing results for self, comparative self, family, and school are consistent with those observed in other studies (Cantin & Boivin, 2004; Shoshani & Slone, 2013). Maintaining satisfaction with friendships apparently indicates stability, even though there has been a decrease in self-perception of social

skills and friend-related self-concept. Results from previous studies also suggest that transition has no negative effects on peer relationships, despite changes in the social network configuration (Cantin & Boivin, 2004; Lanson & Marcotte, 2012).

How can we explain that, on the one hand, adolescents seem to have reduced self-confidence for relationships and, on the other, show unchanged satisfaction with friendships after transition? Less favorable self-assessments of social skills and social self-concept can be a consequence of transition, marked by social challenges, changes in peer group composition, and disruptions with friendships. In this context, students need to reestablish themselves in a new, larger and more complex social environment, and form satisfying social relationships with new friends while dealing with the loss of some of their ES friends. These demands can intensify students' insecurity in new social situations, leading to less favorable self-assessments of their own coping skills.

In contrast, school friends can help cope with new school requirements. They can also be a source of comfort when experiencing stressful situations related to school transition. In addition, for children experiencing interpersonal difficulties in the 5th grade, transition may represent a 'new beginning', an opportunity for them to be part of a new group in which they can reestablish their social status and relationships with their peers. Thus, stability in satisfaction with friendships may be related to strengthening new friendships in the 6th grade. This interpretation is consistent with the findings of the study by Cantin and Boivin (2004), in which school transition was associated with intensified supportive relationships with school friends and increased perception of social acceptance by peers.

According to this interpretation, the decrease in social skills would be a transitory phenomenon due to the uncertainties of the new social environment. According to this hypothesis, subject to empirical verification, there seems to be no incompatibility between the indicators of academic performance and reduced social skills. In other words, there would be no incongruity between the results and the empirical evidence of a positive association between the academic and interpersonal domains (Orpinas et al., 2015; Primi et al., 2016).

Regarding sex, as found in other studies, girls showed better performance in Portuguese (Bellmore, 2011; Malaspina & Rimm-Kaufman, 2008; Sebanc et al., 2014), better social skills (Correia-Zanini &

Marturano, 2016) and increased symptoms of stress in the 6th grade (Lipp et al., 2002). Girls presented the lowest self-concept in the 6th grade; however, they did not show the largest decline as found in older adolescents by Modecki et al., (2018). Sex comparisons have indicated different tendencies in the dimensions of life satisfaction: some results are like those of Gao et al., (2015), in which girls are more satisfied with school, and Cantin and Boivin (2004), in which girls are more satisfied with friendships.

Final considerations

From the perspective of the challenges that children face during transition (Elias, 1989), the results suggest interference in the various adaptive domains as predicted in the conceptual framework. However, the interpretation of these results requires caution, since the prospective design of the investigation does not have the power to reveal cause and effect relationships. As argued when discussing findings related to self-perceptions, school transition coincides with a period of rapid developmental changes that may explain, at least in part, some of the variations found between the 5th and 6th grades. In addition, the statistical analysis model captures central tendencies and is not sensitive to individual variations in developmental trajectories. Children in the same cohort may have divergent developmental trajectories, as demonstrated, for example, by Malti's et al., (2015) research on aggressive behavior.

Among the limitations of this study, the one related to the sample stands out as it does not allow the generalization of the results, since it was limited to public-school students of a single city in the state of São Paulo. We acknowledge that including several cities, as well as private schools, would provide a broader view on the subject. However, care was taken in the composition of the sample to ensure its representativeness concerning the public-school population of the city.

Another limitation of the study was the use of the gross results of Prova Brasil as a measure of school performance. As mentioned, the results of academic performance measured by Prova Brasil differed from the results found in other studies. In further investigations, children's school grades should be added, which would allow comparing the results among studies with the social comparison measure without ignoring the individual learning measure.

Within the limitations of the study, the research contributes to investigate school transition. By

detecting relationships previously suggested by studies conducted in other educational systems and based on information provided by the transitioning students in the Brazilian elementary education, this study opens an original line of investigation with relevant questions to be further clarified. Further research could investigate student attributes, family and school characteristics, or school transition characteristics as possible predictors of individual differences to understand how children cope with transition (Bellmore, 2011; Burchinal et al., 2008).

Studying transition from the children's perspective has contributed to the understanding of their multiple expectations, trajectories and outcomes associated with a significant moment for them. One of the main challenges ahead seems to be the understanding of the nuances of this event in the school context and the moment itself.

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Recebido em: 30/07/18

Reformulado em: 30/05/2019

Aprovado em: 28/08/2019

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