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ORIGINAL PAPER

Changes in Character Virtues are Driven by Classroom Relationships: A Longitudinal Study of Elementary School Children

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Abstract

The purpose of this study is to understand the role of school relationships in shaping students' character development in middle childhood. Students and teachers completed surveys on student–teacher relationships, peer relationships, social-emotional learning (SEL), parent-teacher communication, and character strengths of fairness, hope, bravery, teamwork, self-regulation, social responsibility, and prosocial leadership. Participants were 1881 Brazilian children in fourth or fifth grade across 288 classrooms and 60 schools. Data were analyzed using a multi-level model framework. Higher student–student relationships were associated with higher starting scores of character strengths paired with a stronger increase among classes whose relationships improved over time. Higher quality student–teacher relationships were associated with a larger increase in character strengths among boys. Teachers' usage of SEL strategies, student–teacher relationships and student peer relationships were important predictors of both classroom baselines and the change in character strengths across time. Most of the existing literature on character strengths is based on older adolescent samples from affluent countries and with little Latin American representation. This study supports existing literature on the relevancy of character strengths in the educational context, but adds the importance of seeing it as a contextual and relational outcome.

Keywords Character · Socio-emotional learning · Relationships · Social responsibility · Self-regulation

Introduction

The purpose of this study is to understand the role of school relationships and socio-emotional learning (SEL) in shaping students' character development in middle childhood. Education should increase children's overall functioning, not only by sharpening their cognitive development, but also by strengthening their character and the skills to flourish in their communities. Mental health is often assessed as the absence of mental illness, when it should also be measured through positive markers such as character strengths and well-being. Influential character development researchers have long stated that goodness is not the absence of problems (Lerner, 2018), and that the school community is vital for human flourishing (Narvaez, 2008). Good character enables an individual to live a life that is good for their community (Narvaez, 2008). This paper takes a positive approach and measures the relational context of the classroom and its effect on character development.

Character can be understood as a developmental system that includes moral cognition, other-regarding social-emotional skills (e.g., perspective-taking), self-regarding social-emotional skills (e.g., self-regulation), and moral critical social engagement (e.g., moral purpose) (Nucci, 2018). This system changes in response to context and relationships and must be understood within the broader relational developmental systems approach (Lerner & Callina, 2014). This means that character is malleable, context-specific, and relationally developed.

There is a line of character research that looks at specific character strengths, such as hope, bravery, and teamwork. Character strengths are positively related to well-being (Shoshani & Slone, 2013; Weber & Ruch, 2012; Dametto & Noronha, 2019), life satisfaction (Blanca et al., 2018; Park et al., 2004; Rashid et al., 2013), and positive affect

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(Weber et al., 2016). Youth who report higher character strengths tend to have fewer depressive symptoms later in adolescence (Gillham et al., 2011; Schutte & Malouff, 2018). Good character is considered to be part of one's psychological capital (Lavy, 2019) and a component of optimal youth development (Park & Peterson, 2009). This line of research is often used in a more trait-like approach to character, instead of a developmental approach, but it provides a level of specificity that is important for the nuanced understanding of virtue development.

The relational developmental systems approach applied to character development calls for more studies to be conducted looking specifically at contextual variables and relationships that nurture and influence character (Lerner & Callina, 2014). This approach emphasizes the bidirectionality of individual and context and the plasticity of human development. Thus, character should always be studied as specific actions-in-context, and character virtues should be seen as a marker of positive youth development (Lerner, 2018). The current study analyzes how relationships in the school, social-emotional learning strategies, and communication with parents can influence specific character strengths.

Character Strengths in the Classroom

Character strengths are a meaningful resource and predictive of desirable school outcomes (Wagner & Ruch, 2014; Weber et al., 2016) and are associated with higher enjoyment of learning, flow, and academic achievement (Wagner et al., 2020). More specifically, the strengths of bravery, fairness, and teamwork are associated with achievement and self-regulation; and hope is positively related to enjoyment and experiencing flow. Longitudinal studies have found evidence connecting character strengths, well-being, and GPA (Shoshani & Slone, 2013), even revealing them as a relevant predictor of which kids would improve their grades (Weber & Ruch, 2011). Unsurprisingly, students high in character strengths also have more positive classroom behavior (Wager & Ruch, 2014), student engagement (Madden et al., 2020), and positive school adjustment (Shoshani & Aviv, 2012).

According to a recent review of character strength interventions, many programs rest on the Aristotelian assumption that perfecting character traits will benefit the broad community (Lavy, 2019). However, current research on specific character strengths tends to focus on individual well-being outcomes (Lavy, 2019). Not only are contextual variables often overlooked, most of the literature of character strengths assume a trait-like function and use these variables as predictors of something else, or at most, an outcome of an intervention. A wealth of work on character development reveals that character is embedded in broader contexts and developed largely through relationships (Berkowitz et al., 2017; Lerner, 2018). This paper seeks to integrate some of the knowledge gained from the study of character strengths, while embedding it in the large body of literature on character development that seeks to understand how it develops in a specific school context.

School Relationships, Socio-emotional Learning, and Character Strengths

Healthy relationships are key for character development both within schools and between schools, families, and communities (Berkowitz, 2017; Narvaez, 2008). For example, college students who had stronger interpersonal relationships with peer and faculty members showed higher gains in character strengths (Hershberg, 2016). Student–teacher relationships can help nurture character and relating with peers can strength moral reasoning capacities (Berkowitz, 2017). Although it stands to reason that character is nurtured through relationships, there is a dearth of research on the effect of student–teacher relationships on specific character strengths. Some research has shown that when teachers are the ones to administer a character strengths intervention, it is more effective (Lavy, 2019). The importance of teachers in intervention effectiveness seeems to indicate that there issomething about the existing relationship that makes an intervention stickier. Though there is a gap on the influence of teacher relationships on specific character strengths, there is strong empirical support for the importance of student–teacher relationships on student engagement (Klem & Connell, 2004; Martin & Collie, 2019). Students who perceive a strong relationship with their teachers also report higher sense of identification with their class (Jiang et al., 2018).

As noted earlier, character is a developmental system that includes socio-emotional skills for self-regulation (Nucci, 2018) and the calibration of reason and emotion (Lapsley, 2019) which highlights the importance of socio-emotional learning (SEL) for character development. There is a wealth of research and intervention data on the importance of SEL (Durlak, 2011). SEL techniques focus on teaching students how to handle their emotions, build social skills, and take others' perspectives (Bear et al., 2014; Elias & Swab, 2006) and SEL interventions are associated with fewer conduct and emotional problems (Durlak, 2011). It stands to reason that, having positive relationships with teachers and receiving regular scaffolding on how to handle emotions and take others' perspectives would influence students' character strengths. Thus, as put in a conceptual review, discipline in a caring school climate is not punishment, but coached character development (Narvaez, 2008). SEL may help foster virtues by modeling good relational and emotional habits which are

a part of broad models of character development (Lerner, 2018).

Peer relations are a cornerstone of childhood development and an important component of school context. Earlier reports show that adolescents perceive a lack of role models (Steen et al., 2003) and see peers as the main influences on their character development. A recent article found that peers tend to nominate friends who have strong character strengths (Wagner, 2019), supporting the connection between peer relationships and character development. However, that study was cross-sectional and cannot establish to what extent those relationships also contributed to character building. It is plausible that the relationships themselves helped to foster character strengths. From a relational developmental systems approach to character development, it is important to consider the bidirectionality of these, and the current study provides some longitudinal data to balance that understanding.

Current Study

The current study is meant to bridge this gap and provide empirical evidence for the role that school-based close relationships, SEL, and parent-teacher communication plays in fostering character strengths. This study adheres to the perspective that character development must be studied in specific individual-context relations across time (Lerner, 2018).

The current study is also meant to bridge a cultural gap. There is limited amount of research on character strengths in younger samples, especially in developing countries (Ray et al., in press). Henrich and colleagues (2010) have argued that, because a predominant portion of the developmental literature is derived from data collected in North America and Europe, the data are not representative of development in the majority of the world. The authors go on to highlight that North America and Europe are WEIRD samples in as much as they are Western, Educated, Industrialized, Rich and Democratic (Henrich et al., 2010). To address this imbalance, the current uses a sample from Curitiba Brazil and may be more generalizable to the majority world.

The current study examines a large sample of Brazilian children, measuring change in seven character strengths over the course of a semester. We tested for the classroom level effects of student perceptions of relationships with teachers and peers above and beyond the role of teacher's SEL strategies. The study also examines parent-teacher communication and the effect of change over time in the classroom level variables while exploring both student self-reported data and teacher-reported relationship measures. Age, gender and socioeconomic status differences are also addressed. This study hypothesized that stronger student–teacher relationships, peer relationships, parent-teacher communication, and SEL would be predictive of higher character strengths and

more growth in character strengths across time. The longitudinal nature of these data helps address some temporal precedence issues of validity. It also permits a more nuanced understanding that these strengths are ever-changing with the plasticity of human development and the realization that virtues are specific actions-in-context (Lerner, 2018).

Methods

Participants

Participants were children aged between seven to 15 ($M_{age} = 9.81$; SD = 0.96) in fourth or fifth grade (288 classrooms and teachers). The age spread is reflective of the Brazilian educational system that has high retention rates and many older students in fourth and fifth grades (IBGE, 2010; OECD, 2015). Approximately half self-identified as White (42.70%), and as male (48.30%). The typical Brazilian school year runs from February to early December, and the data were collected in August and October of 2019. There were 1881 participants who completed both time points and returned parental consent forms. At Time 1, 262 teachers completed questionnaires. Of these, 95% were female, and 75% self-identified as White, and ranged in age from 21 to 68 years ($M = 41$, SD = 8.9).

Procedure

Data were collected from 60 public and private schools recruited through a program aiming to promote positive youth development and prevent peer victimization, involving the departments of education of five municipalities in the metropolitan area of Curitiba, in Brazil. Both data points were prior to the start-up of the program. The study was approved by the Research Ethics Committee at the Federal University of Paraná. Prior to data collection in schools, a meeting was conducted with each school principal stating the purpose of the study and encouraging their support prior to scheduling data collections with teachers and students. Parents received a cover letter explaining the study and their children's rights as participants and gave informed consent, while oral assent to the survey was obtained on the first day of data collection. Students completed the questionnaires during class time with the guidance of a research assistant. Surveys were read aloud with a standardized script by a research assistant, while a second research assistant was available to support individual students and data collection took approximately 40 min. No incentives were provided for participation. Teachers in 4th and 5th year classrooms were invited to participate in the study by filling out a survey and received

a cover letter explaining the objectives of the survey and human subject's approval information, and requesting their informed consent. No incentives were provided for teachers' participation. An envelope with a security sticker was included for the return of the surveys to the school's liaison, and the envelopes were retrieved in schools by researchers one week later.

Measures

The measures were comprised of Likert scales with responses ranging from Strongly Disagree (coded as "−2"), Disagree (coded as "−1"), Agree (coded as "1") and Strongly Agree (coded as "2"). Students rated themselves on a range of character strengths which included bravery, fairness, hope, self-regulation, social responsibility and prosocial leadership and teamwork. Fairness, hope, bravery, teamwork, and self-regulation were chosen character strengths from the VIA-Youth survey (Park & Peterson, 2006) that has 24 strengths, but only these five were measured in this sample. The Prosocial Leadership and Social Responsibility come from Leadbeater and Sukhawathanakul's (2011) work in Canadian schools. All measures were translated, back-translated, and screened by Brazilian educators. See Table 1 for details on all measures and Table 2 for reliability analyses and descriptive statistics.

Students rated the quality of socio-emotional learning, teacher/student relationships and student/student relationships. Meanwhile, at Time 1, teachers rated the degree of teacher/student relationships and student/student

relationships in addition to teacher/parent communication and teacher/staff communication. These measures come from the Delaware School Climate survey that had previously been validated in a Brazilian sample (Bear et al., 2016; Thomas et al., 2019). That survey was created to provide schools with useful information for needs assessment, program development, and program evaluation and has been widely used in schools.

To measure socioeconomic status (SES), the MacArthur Scale of Subjective Social Status was used (Adler et al., 2000). Students viewed a picture of a ladder and were asked to select what rung on the ladder their family was on in society. Students selected out of a scale of 1–10 ($M = 7.46$, S.D. $= 1.99$). This method is strongly correlated with psychological and physiological health outcomes among youth (Quon & McGrath, 2014).

Analytic Strategy

Data were analyzed using a multi-level model framework. All of the various character strengths across the two time points were nested within-individuals (at level 1) and individuals (at level 2) were nested within classrooms (at level 3). Change over time was modeled as a random predictor at the individual and classroom levels, whereas the effect of gender was also allowed to vary at the classroom level. Grade differences and socio-emotional learning strategies were included at the classroom level before testing for the effect of both student–teacher and student–student

Table 1 Measurement scales and sample items

	Adapted from	Number of items	Sample item
Bravery	Park and Peterson (2006)	4	I do the right thing even if others tease me for it
Fairness	Park and Peterson (2006)	4	Everyone's opinion is equally important to me
Hope	Park and Peterson (2006)	4	I am certain I can get through bad times
Self-regulation	Park and Peterson (2006)	4	Even when I really want to do something, I can wait
Social responsibility	Leadbeater and Sukhawathanakul (2011)	7	I look for ways to help and include others
Prosocial leadership	Leadbeater and Sukhawathanakul (2011)	7	I offer to help my peers
Teamwork	Park and Peterson (2006)	4	I am very cooperative when I work in groups
Teacher–student relationships	Bear et al. (2014)	4	Teachers care about their students
Student–student relationships	Bear et al. (2014)	4	Students are friendly to each other
Socio-emotional learning	Bear et al. (2014)	7	Students are instructed to understand how others think and feel
(Teacher) Teacher–student relationships	Bear et al. (2014)	5	Teachers care about students
(Teacher) Student–student relationships	Bear et al. (2014)	5	Students are friendly to each other
(Teacher) Parent–teacher communication	Bear et al. (2014)	4	Teachers work with families to help students when they have problems
(Teacher) Teacher–staff communication	Bear et al. (2014)	4	Teachers, management, teaching staff and technicians work well as a team

Table 2 Descriptive statistics for study variables

	Time 1			Time 2		
	Alpha	Mean	S.D	Alpha	Mean	S.D
Individual character strengths						
Bravery	.66	.93	.94	.63	.92	1.00
Fairness	.62	.45	1.00	.69	.62	.99
Hope	.62	1.17	.83	.60	1.14	.80
Prosocial Leadership	.55	.80	.66	.63	.87	.67
Self-Regulation	.65	− .15	1.21	.69	− .09	1.24
Social Responsibility	.56	.96	.61	.65	1.05	.63
Teamwork	.63	.79	.95	.66	.93	.90
Demographic variables						
Age	–	–	–	–	9.36	1.05
Socioeconomic status	–	–	–	–	7.46	1.99
Classroom variables (students)						
Teacher/student relationships	.74	1.54	.63	.72	1.53	.59
Student/student relationships	.81	.67	1.04	.79	.36	.98
Socio-emotional learning strategies	.65	.94	.77	.74	1.00	.80
Classroom variables (teachers)						
Teacher/student relationships	.84	1.24	.57	–	–	–
Student/student relationships	.88	.56	.79	–	–	–
Teacher/parent communication	.81	1.15	.58	–	–	–
Teacher/staff communication	.88	1.08	.70	–	–	–

relationships. Changes in these classroom relationships were added next. We also tested for two-way interactions between the classroom level predictors. Finally, the teacher-reported relationship variables were added in the last model. The effects reported below were only interpreted if they were statistically significant (at $p < 0.05$), proportionally reduced prediction error (PRPE $\geq 1.00\%$) and significantly improved the models (as measured by a significant $\Delta\chi^2$ test).

Results

Descriptive statistics and bi-variate correlations are provided in Tables 2 and 3. Analyses began with an unconditional model containing no predictors. This provided an intra-class correlation coefficient such that 70.26% of the variability in the various character strengths was at the within-individual level, 27.80% at the individual level, leaving 1.93% of the variability at the classroom level. This reflected a significant proportion of classroom level variance ($\chi^2_{(160)} = 277.83$, $p < 0.05$), justifying our multi-level modeling approach.

There was significant change over time ($b = 0.11$, S.E. $= 0.02$, $t_{(160)} = 6.60$, $p < 0.05$) in that self-reported character strengths increased over the course of the study (PRPE $= 6.06\%$; $\Delta\chi^2_{(5)} = 465.95$, $p < 0.05$). Moreover, there was significant variability in the change over time at the individual ($\Delta\chi^2_{(1718)} = 2889.52$, $p < 0.05$) and classroom lev-

els ($\Delta\chi^2_{(160)} = 265.82$, $p < 0.05$). Beyond mean differences in the character strengths, the increase over time was most notable in hope and teamwork, and self-regulation was the lowest across time points.

At the individual level, age, gender and socioeconomic status were included as predictors of the character strengths intercept (i.e., starting values) and the change over time. One significant positive effect emerged of socioeconomic status on the change over time ($b = 0.01$, S.E. < 0.01, $t_{(1877)} = 2.26$, $p < 0.05$). In other words, children who self-reported as lower SES showed a stronger increase in character strengths (PRPE $= 2.96\%$; $\Delta\chi^2_{(3)} = 1598.33$, $p < 0.05$). There were no other significant age or gender effects at the individual level.

Classroom-level socio-emotional learning strategies were associated with higher starting scores of character strengths ($b = 0.17$, S.E. $= 0.04$, $t_{(158)} = 4.65$, $p < 0.05$) paired with a weaker increase as a result ($b = − 0.03$, S.E. $= 0.02$, $t_{(158)} = − 1.96$, $p < 0.05$). These effects reduced prediction error (PRPE $= 35.22\%$ and 7.50%) and significantly improved the modeling of the intercept and change over time ($\Delta\chi^2_{(1)} = 43.53$ and 5.64, $p < 0.05$), respectively.

Next, student–teacher and student–student relationships (as rated by students) were included as predictors of starting character strengths and the change over time. There was one significant effect of student–teacher relationships on the character strength intercept ($b = 0.08$, S.E. $= 0.04$, $t_{(156)} = 2.03$, $p < 0.05$). To explain, better student–teacher

Table 3 Zero-order correlations among the study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1. T1 Bravery	1	.57*	.45*	.45*	.36*	.42*	.47*	.34*	.30*	.34*	.21*	.36*	−.02	.06*	.07*	.27*	.28*	.39*	.17*	.14*	.25*	–	–	–	–
2. T1 Fairness	.57*	1	.42*	.47*	.48*	.43*	.40*	.48*	.29*	.38*	.31*	.39*	−.01	.06*	.07*	.30*	.37*	.43*	.23*	.25*	.31*	–	–	–	–
3. T1 Hope	.45*	.42*	1	.37*	.30*	.36*	.28*	.25*	.37*	.26*	.14*	.28*	−.02	.05*	.05*	.26*	.20*	.35*	.19*	.12*	.23*	–	–	–	–
4. T1 Prosocial Leadership	.45*	.47*	.37*	1	.32*	.54*	.31*	.33*	.26*	.46*	.21*	.37*	−.05*	.06*	.09*	.27*	.34*	.40*	.24*	.26*	.30*	–	–	–	–
5. T1 Self-Regulation	.36*	.48*	.30*	.32*	1	.30*	.27*	.35*	.22*	.28*	.50*	.31*	<−.01	−.02	.05*	.19*	.31*	.28*	.18*	.20*	.20*	–	–	–	–
6. T1 Social Responsibility	.42*	.43*	.36*	.54*	.30*	1	.32*	.33*	.25*	.33*	.18*	.42*	−.08*	.13*	.10*	.28*	.31*	.38*	.25*	.22*	.27*	–	–	–	–
7. T2 Bravery	.47*	.40*	.28*	.31*	.27*	.32*	1	.58*	.48*	.508*	.39*	.48*	−.01	.07*	.09*	.22*	.29*	.25*	.21*	.22*	.38*	–	–	–	–
8. T2 Fairness	.34*	.48*	.25*	.33*	.35*	.33*	.58*	1	.43*	.55*	.49*	.53*	−.03	.11*	.09*	.27*	.35*	.30*	.31*	.35*	.47*	–	–	–	–
9. T2 Hope	.30*	.29*	.37*	.26*	.22*	.25*	.48*	.43*	1	.37*	.32*	.38*	−.02	.06*	.06*	.22*	.21*	.22*	.23*	.18*	.36*	–	–	–	–
10. T2 Prosocial Leadership	.34*	.38*	.26*	.46*	.28*	.33*	.508*	.55*	.37*	1	.36*	.62*	−.04	.07*	.11*	.29*	.39*	.33*	.35*	.39*	.45*	–	–	–	–
11. T2 Self-Regulation	.21*	.31*	.14*	.21*	.50*	.18*	.39*	.49*	.32*	.36*	1	.33*	.03	−.02	.08*	.12*	.29*	.16*	.16*	.25*	.28*	–	–	–	–
12. T2 Social Responsibility	.36*	.39*	.28*	.37*	.31*	.42*	.48*	.53*	.38*	.62*	.33*	1	−.07*	.14*	.12*	.29*	.37*	.34*	.38*	.39*	.45*	–	–	–	–
13. Age	−.02	−.01	−.02	−.05*	<−.01	−.08*	−.01	−.03	−.02	−.04	.03	−.07*	1	−.07*	−.06*	−.05*	−.04*	.01	−.06*	−.02	−.02	–	–	–	–
14. Gender	.06*	.06*	.05*	.06*	−.02	.13*	.07*	.11*	.07*	.07*	−.02	.14*	−.07*	1	.06*	.07*	.04*	.07*	.09*	.03	.06*	–	–	–	–
15. Socioeconomic Status	.07*	.07*	.05*	.09*	.05*	.10*	.09*	.09*	.06*	.11*	.08*	.12*	−.06*	.06*	1	.05*	.09*	.04	.05*	.08*	.04*	–	–	–	–
16. T1 Teacher/Student Rel	.27*	.30*	.26*	.27*	.19*	.28*	.22*	.27*	.22*	.29*	.12*	.29*	−.05*	.07*	.05*	1	.38*	.34*	.51*	.23*	.32*	–	–	–	–

Table 3 (continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
17. T1 Student/Student Rel	.28*	.37*	.20*	.34*	.31*	.31*	.29*	.35*	.21*	.39*	.29*	.37*	−.04*	.04*	.09*	.38*	1	.38*	.33*	.52*	.34*	–	–	–	–
18. T1 Socio-Emotional	.39*	.43*	.35*	.40*	.28*	.38*	.25*	.30*	.22*	.33*	.16*	.34*	.01	.07*	.04	.34*	.38*	1	.27*	.24*	.41*	–	–	–	–
19. T2 Teacher/Student Rel	.17*	.23*	.19*	.24*	.18*	.25*	.21*	.31*	.23*	.35*	.16*	.38*	−.06*	.09*	.05*	.51*	.33*	.27*	1	.36*	.41*	–	–	–	–
2. T2 Student/Student Rel	.14*	.25*	.12*	.26*	.20*	.22*	.22*	.35*	.18*	.39*	.25*	.39*	−.02	.03	.08*	.23*	.52*	.24*	.36*	1	.35*	–	–	–	–
21. T2 Socio-Emotional Learn	.25*	.31*	.23*	.30*	.20*	.27*	.38*	.47*	.36*	.45*	.28*	.45*	−.02	.06*	.04*	.32*	.34*	.41*	.41*	.35*	1	–	–	–	–
22. Teacher T/S Rel	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	.38*	.71*	.56*
23. Teacher S/S Rel	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	.38*	1	.36*	.41*
24 Teacher T/P Comm	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	.71*	.36*	1	.69*
25. Teacher T/S Comm	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	.56*	.41*	.69*	1

*Denotes $p < .05$

Fig. 1 The effect of starting and change over time in socio-emotional learning strategies on the change in character strengths. *Note* The range of the y-axis has been altered to highlight the effects. Low and high refers to 1 standard deviation below and above the mean, respectively. Moreover, decreased and increased was designated as a one standard deviation change from time 1 to time 2
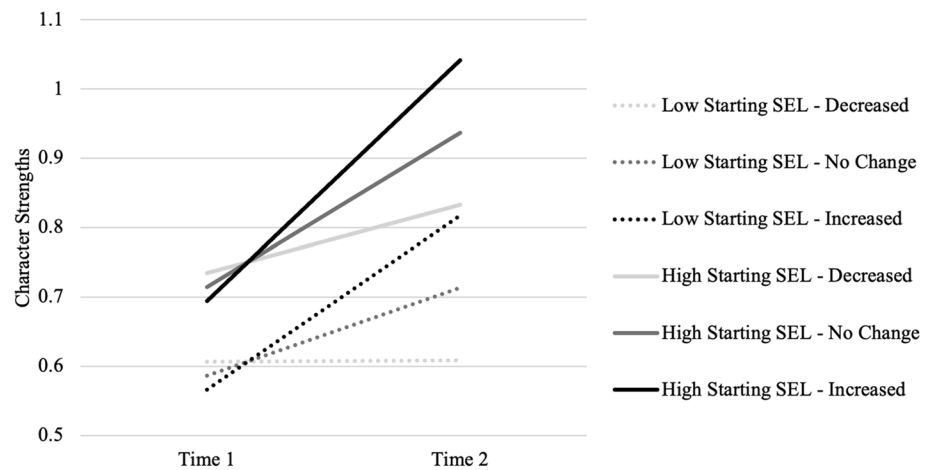
relationships are related to more self-reported character strengths (PRPE = 11.86%; $\Delta \chi^2_{(2)} = 10.75$, $p < 0.05$).

We also tested for the effects of changes in classroom level socio-emotional learning strategies, student–teacher and student–student relationships (as rated by students). Regarding socio-emotional learning strategies, not only was there a benefit on starting character strengths but among students who reported an increase, there was a stronger increase in character strengths as well (see Fig. 1). Above and beyond the effect of socio-emotional learning strategies, there was also a similar significant effect of student/student relationships on the change in character strengths (Fig. 2). These effects of changes in classroom level socio-emotional learning strategies, teacher/student and student/student relationships further reduced prediction error (PRPE = 36.06% and 55.24%) and significantly improved the modeling of the intercept and change over time ($\Delta \chi^2_{(3)} = 22.51$ and 37.66, $p < 0.05$), respectively.

Finally, we examined the effects of Time 1 teacher-reported teacher/student relationships and student/student relationships in addition to teacher/parent communication and teacher/staff communication on both the starting character strengths and the change over time in character strengths above and beyond all of the previous associations detailed above. Two effects emerged. Specifically, higher quality teacher/student relationships were associated with a larger increase in character strengths among boys but not differently among girls (Fig. 3).

An opposite effect was observed for teacher-reported teacher/parent communication (Fig. 4), where higher communication among boys was related to a weaker increase in character strengths, but among girls, more communication was related to higher character strengths. These effects of teacher-reported teacher/student relationships and student/student relationships in addition to teacher/parent communication and teacher/staff communication again reduced prediction error (PRPE = 44.92% and 80.04%) and significantly improved the modeling of the gender differences on the intercept and change over time ($\Delta \chi^2_{(4)} = 7.38$ and 11.84, $p < 0.05$), respectively.

Fig. 2 The effect of starting and change over time in student–student relationships on the change in character strengths. *Note* The range of the y-axis has been altered to highlight the effects. Low and high refers to 1 standard deviation below and above the mean, respectively. Moreover, decreased and increased was designated as a one standard deviation change from time 1 to time 2
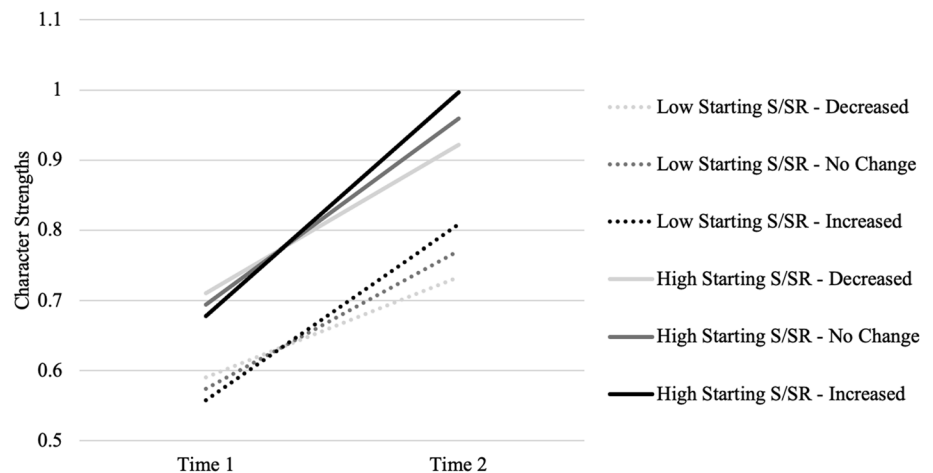
Fig. 3 The effect of starting teacher-reported student–teacher relationships on the change in character strengths. *Note* The range of the *y*-axis has been altered to highlight the effects. Low and high refers to 1 standard deviation below and above the mean, respectively
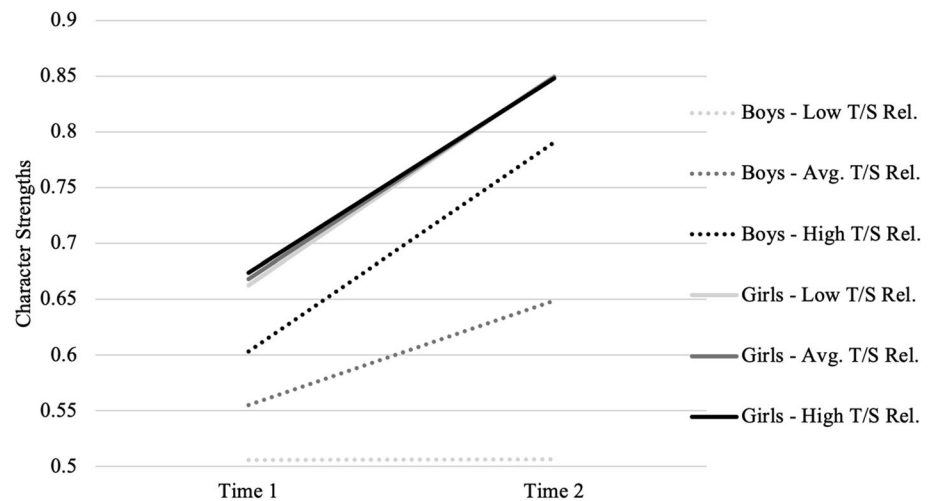
Fig. 4 The effect of starting teacher-reported teacher-parent communication on the change in character strengths. *Note* The range of the *y*-axis has been altered to highlight the effects. Low and high refers to 1 standard deviation below and above the mean, respectively
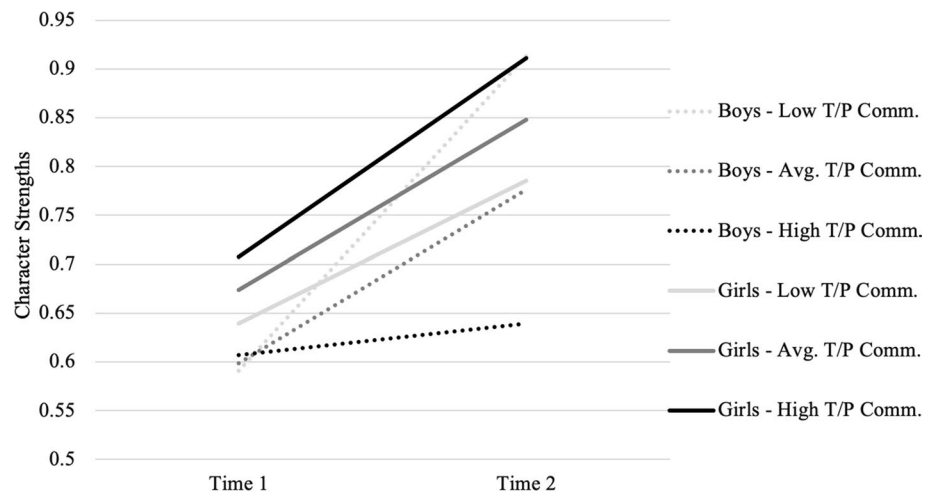
Discussion

Close relationships within the classroom and the SEL strategies employed are vital to students' character strength improvement across time. The results from this study support the hypothesis that the development of character strengths depends on the relationships and communication in the classroom. Prior empirical studies on character strengths have focused on individual differences (Lavy, 2019), while more studies should examine the relational context necessary for character to develop and thrive. This contextual approach is in line with broad theoretical work on the importance of understanding contextual variability in character development (Lerner, 2018). The relationships and SEL strategies within a classroom can activate character development, or restrain it.

The results show that, by and large, the individual character strengths slightly increased across time, with hope being the highest and self-regulation being the lowest across time points. The change across time became clearer once the classrooms were differentiated based on relational variables. Perhaps the natural course of the academic year and the natural deepening of relationships contribute to an overall increase in character strengths, even in absence of a specific intervention. The follow-up analyses illustrate that, not only is SEL associated with the differences in where the classes started on character strengths, but the change in SEL is linked to a stronger change in character strengths over time. Character strengths at the end of the study were highest among classes that started high in SEL and even increased in SEL. However, even in classes with low SEL at Time 1, they still showed an increase in character strengths if they had an increase in SEL between time points. This longitudinal design increases the validity of the connection between the variables. SEL can support the competencies needed to develop characteristics such as hope, teamwork, social responsibility, prosocial leadership, fairness, bravery,

and self-regulation. Calibrating emotion and reason is vital for character development (Lapsley, 2019), which is likely why SEL has such a strong relation to the measured character strengths in this study.

Our study supports the unique role that teacher relationships and SEL techniques play in the fostering of character strengths, and more data should continue to investigate teacher characteristics. Our findings support the understanding that, in a healthy classroom environment, discipline can be coached character development (Narvaez, 2008). According to Richard Lerner, positive and sustained adult-youth relations are key to positive youth development (Lerner, 2018). The current results extend his line of research, which has been predominantly in community-based programs, to the classroom. Our results suggest that healthy relationships between teachers and students could be important to sustain and increase character strengths across time.

The results revealed that peer relationships, even after accounting for the role of SEL, are important for character strengths development. Classrooms that started low in peer relationships had lower character strengths than classes that started higher in peer relationships. Moreover, increasing peer relationships was associated with a steeper increase in character strengths across timepoints. Our results align line with Berkowitz's (2017) work on the importance of peers to develop moral reasoning capacities. Friendships and a strong relational context may help students take others' perspectives, act as motivation to collaborate, help others, and feel a stronger sense of hope in the future because the support networks help generate and nurture these strengths. Some researchers have suggested that character strengths improve social relationships (Gillham et al., 2011) or that children choose friends with strong character (Wagner, 2019). However, our study sought to examine the other direction of that relation, suggesting that the peer relationships themselves may be a precursor to students' character development. As Lerner and Callina (2014) have written, individuals have agency and purpose and character is the adaptive result of the bidirectionality of context and individual. The goal of this study was not to rule out one direction over another. In reality, context and individual are always co-influencing each other, or, in this case, peer relationships and individual character are always bidirectional. However, the overarching reality is the importance of understanding that peer dynamics are active moralizing agents in character development.

One of the strengths of this study is that it also accounted for teachers' perceptions of student–teacher relationships and it mattered above and beyond students' self-reported relationships. This had an especially strong impact on boys' character strengths compared to girls' strengths. This is a particularly relevant finding because a recent meta-analysis revealed that, especially in younger samples, girls' character strengths are higher than boys (Heintz et al., 2019) and

leading researchers in character development have called for more research on gender differences (Lerner, 2018). Relationships with teachers (perhaps with authority figures more broadly) may be a key component of nurturing character strengths in young men.

Parent-teacher communication was expected to be an important contributor to character strengths, due to the importance of school-home partnerships for student flourishing. Communication was higher for girls compared to boys at Time 1 and tended to increase for every group across time, presumably because the end of the Brazilian academic year (December) was approaching. For girls, more communication was related to high initial character strengths and increased across time. However, for boys, those with most communication had the lowest character strength profiles. This anomaly is presumably because of behavioral problems and the need to involve parents in heightened disciplinary matters.

Schools are imperfect contexts where students will suffer disappointments in relationships and experience emotional outbursts at the cusp of their emotion-regulation control. How these disputes are settled, and how the emotions are processed are foundational for children's character development. Much research on character strengths has shown its predictive value over positive outcomes, or evaluated character interventions. However, this study points to the contextual factors that can be important for the development of character strengths. Future studies should investigate if school relationships can amplify the positive effects of a character strengths intervention. Character strength development in the schools is vital for the twenty-first century education model (Lavy, 2019). It is well accepted that many of the jobs children will eventually hold do not yet exist. Thus, is it challenging to design an educational system to prepare them for unknown tasks. Character strengths may help equip students for the changing future because they are key components of human flourishing that will theoretically equip them to work collaboratively, engage, and persist in challenging times. This study demonstrates the importance of the relational context for nurturing character strengths and character strengths research should seek to understand how these develop contextually and how relationships with authorities and peers can be used to maximize the efficacy of character interventions.

Limitations and Future Directions

It is important to remember that character development empirical research is a snapshot in time that is context-specific and ever-changing (Lerner, 2018). This is a short longitudinal study that is helpful to look at temporal precedence and emphasize the plasticity of human development in specific context, but not sufficient to reveal developmental

trends. Character traits were, as a whole, higher in the second timepoint, but that does not signal that these tend to increase developmentally. Instead, these fluctuations should be seen as a sign of human plasticity and it is notable that small changes varied in line with other contextual variables.

The psychometric properties for social responsibility and prosocial leadership for Time 1 were weak. These were mitigated by the longitudinal nature of the data and the stronger properties exhibited in Time 2. Future studies should focus more on relational context for character strength development and look at their precursors, not just the outcomes of these strengths. Much of the research on character strengths is not connecting these concepts with what we already know about the importance of context, healthy relationships, and SEL.

Conclusion

Socio-emotional education, strong relationships with teachers, and friendships in middle childhood are vital for promoting character development. This study supports existing literature on the relevancy of character strengths in the educational context, but adds the importance of seeing it as a contextual outcome, and something that is nurtured in daily relationships with peers and authorities. Teachers' usage of SEL strategies, student–teacher relationships and student peer relationships were important predictors of both classroom baselines and the change in character strengths across time. This study supports the hypothesis that the relational context of classrooms and explicit socio-emotional techniques are vital to character development in middle childhood.

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