



ELSEVIER

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Child Abuse & Neglect

journal homepage: www.elsevier.com/locate/chiabuneg

Truancy: The relevance of resilience-related internal assets, student engagement and perception of school success in youth living with parents and in residential care

Anabela Caetano Santos^{a,b,c,*}, Celeste Simões^{a,b}, Cátia Branquinho^{a,b},
Patrícia Arriaga^c

^a *Aventura Social and DECSH, Faculdade de Motricidade Humana, Universidade de Lisboa, Lisboa, Portugal*

^b *Instituto de Saúde Ambiental (ISAMB), Faculdade de Medicina, Universidade de Lisboa, Lisboa, Portugal*

^c *ISCTE – Instituto Universitário de Lisboa (IUL), CIS-IUL, Lisboa, Portugal*

ARTICLE INFO

Keywords:

Student engagement
Social and emotional competencies
School absenteeism
Youth
Residential care

ABSTRACT

Background: School absenteeism is associated with multiple negative short and long-term impacts, such as school grade retention and mental health difficulties.

Objective: The present study aimed to understand the role of resilience-related internal assets, student engagement, and perception of school success as protective factors for truancy. Additionally, we investigated whether there were differences in these variables between students living in residential care and students living with their parents.

Methods: This study included 118 participants aged 11 to 23 years old ($M = 17.16$, $SE = 0.26$). The majority were female ($n = 61$, 51.7 %) and Portuguese ($n = 98$, 83.1 %), with half living in residential care. In this cross-sectional study, participants responded to self-report questionnaires. Hierarchical regression analysis was used to understand the factors associated with truancy.

Results: There were no group differences in resilience-related internal assets and their perception of school success. On the contrary, participants in residential care reported more unexcused school absences, more grade retentions, higher levels of depression, and lower levels of student engagement. Moreover, hierarchical linear regression controlling for key variables (i.e., living in residential care or with parents, school grade retention, and depression) showed that perception of school success and resilience-related internal assets significantly contributed to truancy.

Conclusions: Results are discussed in the context of universal and selective interventions. These interventions can foster individual strengths and provide opportunities for every student to experience success. Consequently, they promote engagement and reduce the likelihood of school absences, especially for those in more vulnerable situations such as youth in residential care.

1. Introduction

School absenteeism is often seen as a lack of regular attendance during compulsory education. It leads to multiple negative short and long-term impacts on young people's lives, which follow through to adulthood (Kearney et al., 2019). A topic of interest in recent

* Corresponding author at: Faculdade de Motricidade Humana, Lisbon University, Estrada da Costa, 1495-688 Cruz Quebrada – Dafundo, Portugal.

E-mail addresses: anabelasantos@campus.ul.pt, anabela.caetano.s@gmail.com (A.C. Santos).

<https://doi.org/10.1016/j.chiabu.2022.105819>

Received 13 December 2021; Received in revised form 21 July 2022; Accepted 23 July 2022

Available online 2 August 2022

0145-2134/© 2022 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

decades, the literature has shown that school absenteeism can have severe impacts academically, such as reduced educational performance and fewer literacy skills, school grade retention, and dropping out of school (Cabus & De Witte, 2015; Gottfried, 2014; Smerillo et al., 2018). A study using a Bayesian duration model showed that the risk of truants leaving school before finishing their compulsory education was 37.4 % higher than their peers who attend school regularly (Cabus & De Witte, 2015). Regarding health, school absenteeism is associated with increased risk-taking behaviors (Eaton et al., 2008), somatic symptomatology, and mental health problems (González et al., 2018), together with the consequences in emotional and social domains (e.g., Gottfried, 2014; Kearney, 2016; Maynard et al., 2012; Santibañez & Guarino, 2021). From the U.S. Department of Education's (2019) perspective, school absenteeism can be considered a public health problem and a concealed educational crisis. Moreover, a meta-analysis concluded that truancy was associated with high levels of depression, meaning poor school attendance may indicate depression (Finning et al., 2019).

Truancy, one of the oldest terms for school attendance problems, generally refers to illegal or unexcused school absenteeism (Kearney et al., 2019) and is perceived as an active behavior of school disengagement (Keppens & Spruyt, 2020). Furthermore, students in vulnerable social and economic situations are at higher risk of disengagement (Ungar et al., 2019), including young people in residential care. Known for their difficulties in following a regular educational course, considering the interruptions, deviations, or restarts that their life may suffer (Erdei & Kovács, 2020), they also are more vulnerable and prone to poor mental health when compared with the general population (Lou et al., 2018). Furthermore, youth who live in residential care experience a greater risk of failure and dropping out of school from an early age (García-Molsosa et al., 2021). Although a meta-analysis also reported that children in residential care with higher levels of resilience had better developmental outcomes (Lou et al., 2018).

1.1. Social and emotional competencies, resilience, and engagement

The Collaborative for Academic, Social, and Emotional Learning (CASEL) framework addresses five interconnected areas of social and emotional competencies that are developed and should be promoted throughout life, namely self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Greenberg et al., 2017). Research in this area maintains that social and emotional learning (SEL) should be set as a public health approach in education since, in the short term, there are benefits such as augmented school performance, improved self-confidence, and diminished problem behaviors (Greenberg et al., 2017). A meta-analysis of follow-up effects showed that participants in SEL programs report higher overall well-being, social and emotional competencies and attitudes compared with control groups, thus concluding that SEL promotes positive youth development (Taylor et al., 2017). Moreover, a recent cross-cultural study showed that social and emotional competencies are associated with student engagement despite cross-cultural variables (Santos et al., 2022). Grounded in the CASEL framework and given the heightened risk children in residential care homes face, our study also aligns with the integrative and conceptual model for healthy development proposed by Kia-Keating et al. (2011). The authors proposed a model of healthy and positive development for adolescents based, on one hand, on resilience and, on the other hand, on the positive development approach. In the resilience approach, which presupposes some form of risk exposure, the author advocates for a path of protection, of overcoming vulnerability, as well as overcoming adversity. In the perspective of positive youth development, the focus is placed on promotion, specifically the promotion of resources leading to positive development. In either of these approaches (i.e., the promoting and protecting pathway), healthy development requires the growth of internal resources (i.e., social and emotional competencies) and a positive relation with school/education that can support young people and enable competence building. The model also underlines the need for students to develop their self-efficacy, motivation, and sense of academic success within the developmental domains selected from the areas targeted in successful school-based programs (i.e., social, emotional, physiological and educational domains). Moreover, this model focuses on the protection pathway (despite promotion) to highlight the need to mediate or buffer risk factors. Based on this framework, the present research focuses on young people living in residential care and therefore exposed to more risk factors, and on those with a more protective environment, such as young people living with their parents.

Resilience can be seen as the individual ability to successfully adapt and persevere in the face of significant challenges and stressors that threaten functioning or future development (Masten & Barnes, 2018). During youth, resilience can be observable through different outcomes: positive social and emotional competencies; academic engagement behaviors, such as good academic performance; establishing and maintaining healthy relationships; feelings of well-being; and absence of internalization or externalization problems (Masten, 2011). It is defined as a dynamic, interactive, multisystemic, and developmental process involving external and internal assets (Southwick et al., 2014; Ungar, 2018). Since internal assets interact as moderators of adverse life events on well-being (Simões et al., 2015), their presence is necessary for the resilience process to be successful. Internal resilience assets include, for example, cooperation and communication, empathy, problem-solving, self-efficacy, self-awareness, and goals and aspirations (Hanson & Kim, 2007). Developing competencies associated with resilience means not only overcoming adversity but, more broadly, reflects one's capacity to develop sufficient self-efficacy to problem solve, think creatively and purposefully, and develop trusting relationships with a sense of moral connectedness (Padesky & Mooney, 2012). Children with adverse childhood experiences have lower rates of SE, though those who show higher scores in resilience also report higher engagement (Bethell et al., 2014).

Student engagement (SE) is a broad concept that explains students' commitment, interaction, and connectedness with academic coursework, curriculum, and activities that support learning and achievement (Wang & Hofkens, 2020). SE is not only related to better school trajectories and outcomes (Lei et al., 2018; Virtanen et al., 2018), but it is also associated with well-being (Pietarinen et al., 2014), life satisfaction (Santos et al., 2019), and better physical and psychological health (Salmela-Aro & Read, 2017).

Furthermore, higher resilience levels were found for those who reported higher levels of SE (Khawaja et al., 2017; Sevil-Gülen & Demir, 2021). This can be due to the fact that SE is associated with a decrease in the likelihood of academic dropout (Fredricks, 2015) and that students with high SE also tend to express less involvement in disruptive behaviors, such as truancy (Virtanen et al., 2018) or

delinquent behaviors (Kulig et al., 2019). Moreover, for at-risk youth, higher levels of SE seem to be even more relevant (Ungar et al., 2014). For instance, the school can offer a space and time of protection from peer, family, and community risk factors (Fredricks et al., 2004). The school can also provide experiences that might contribute to the development of hope, self-regulation, self-efficacy (Dixon & Stevens, 2018) and positive relationships with peers and teachers (Ungar et al., 2014; Virtanen et al., 2018), which are associated with SE.

Finally, in this study, we wish to draw attention to an aspect that has been almost ignored in the literature: perception of school success (PSS). PSS is a subjective indicator of general school performance (Soetan, 2020) and is positively associated with self-efficacy and engagement (Guntern et al., 2017; Santos et al., 2019), with students who have high academic performance usually appraising themselves as successful (Soetan, 2020). PSS can be considered a protective factor. A study has found that students who report higher PSS also report a higher quality of life and school satisfaction and lower school-related stress (i.e., homework, the perception of high and complex workload and parental pressure for good grades (Santos et al., 2019).

The Health Behaviour School-Aged Children (HBSC) study, which included 220,000 adolescents (11, 13, and 15 years old) from 45 countries/regions, showed that between 2014 and 2018, in around a third of the countries/regions, school satisfaction decreased over time (Inchley et al., 2020). Moreover, data from the HBSC in 2018 showed that Portuguese students' school satisfaction level was below the European medium score (Matos et al., 2018).

Additionally, data from two different studies with representative adolescent Portuguese samples showed that high school students reported lower levels of school satisfaction, PSS (Santos et al., 2019) and SE (Santos et al., 2021) than middle school students, suggesting a decreasing tendency across school years.

Although research regarding SE and resilience with youth in foster care has increased, literature on those in residential care is still scarce. A study that compared types of alternative care showed that young people in residential care suffered more interpersonal trauma and had higher emotional and behavioral needs and risk behaviors than those in foster homes (Sim et al., 2016), which reinforces the need for research and reflection upon young people in residential care.

1.2. The present study

Truancy is highly associated with adverse health, social, and economic outcomes throughout youth and adulthood. Even though resilience-related internal assets have been shown to protect against risk factors and increase SE and PSS, there is little previous research into resilience and school outcomes in children in residential care. It is highly needed, since they are more prone to being less engaged with school and more likely to experience worst school outcomes.

Based on previous knowledge, we hypothesized that participants living with parents will experience less grade retention, truancy, and depression symptoms and will report higher scores of SE, PSS, and resilience than their peers in residential care. We also hypothesized that SE, PSS, and resilience will be negatively associated with truancy, while grade retention and depression symptoms will be positively associated with truancy. Finally, we will explore the association of SE, PSS, and resilience with truancy.

Table 1
Demographic characteristics of the total sample and for the groups.

Variable	Total sample		Group				χ^2	p
			RC		LP			
	N	%	n	%	n	%		
Gender							3.18	.204
Women	61	51.7	30	51.7	31	52.5		
Men	53	44.9	25	43.1	28	47.5		
Portuguese nationality	98	83.1	44	88.0	54	91.5	7.33	.502
School level							4.29	.232
Late primary (5th and 6th)	11	9.3	7	6.9	4	6.9		
Middle school (7th to 9th)	39	33.1	23	41.1	16	27.6		
High school (10th to 12th)	54	45.8	22	39.3	32	55.2		
University (undergraduates)	10	8.5	4	7.1	6	10.3		
	M	SE	M	SE	M	SE	t	p
Age	17.16	0.26	17.35	0.37	17.00	0.37	-0.66	.507
Truancy	0.44	0.06	0.65	0.10	0.24	0.07	-3.58	<.001
School grade retention	1.19	0.11	1.71	0.16	0.68	0.14	-4.92	<.001
Depression	8.20	0.50	9.67	0.80	6.73	0.55	-3.02	.003
Student engagement	3.26	0.06	3.12	0.09	3.40	0.06	2.7	.007
Perception of school success	2.68	0.06	2.73	0.10	2.63	0.08	-0.81	.417
Resilience internal assets	3.10	0.04	3.05	0.06	3.14	0.05	1.19	.236

Note. RC = residential care; LP = living with parents.

2. Method

2.1. Participants

A sample of 64 participants was collected at foster care homes. However, five participants were removed due to missing values above 50 % on each scale (as recommended by Hair et al., 2014). The final sample combined 59 participants living in institutional care and a comparable subsample of 59 participants living with their parents. The equivalence was established regarding the geographical area, age, and gender. Though, when age was unavailable and school year and grade retention were, these were used to get a suitable comparable participant for the comparative sample. The comparison sample was retrieved from a representative sample of Portuguese students published elsewhere (Santos et al., 2021). The two samples were collected during the same period and belong to a larger research project about the analysis of student engagement and social and emotional competencies in youth in Portugal.

The total sample included 118 participants, aged 11–23 years ($M = 17.16$, $SE = 0.26$), the majority being female ($n = 61$, 51.7 %) and Portuguese ($n = 98$, 83.1 %), and all were attending Portuguese public schools or universities. Demographic characteristics of the total sample and groups' differences can be found in Table 1.

2.2. Measures

Sociodemographic data comprised age, gender, academic year, nationality, truancy (unexcused school absences, answers could be “never” (0), “sometimes” (1), or “yes, frequently” (2)), and school retention (i.e., the number of school grade retentions until that moment, answers could go from “never” (0) to “4 times or more” (4)).

PSS was assessed through a single item asking participants to indicate their school success (“How successful do you find yourself in school/college?”) on a 4-point scale ranging from 1 (“I think I’m a student without any success”) to 4 (“I think I’m a very successful student”). This item has been used in previous studies using the HBSC protocol (Matos et al., 2018; Santos et al., 2019).

Depressive symptoms were assessed with the Patient Health Questionnaire 9-item scale (PHQ-9; Ferreira et al., 2018; Kroenke et al., 2001). PHQ-9 includes nine items, using a 4-point scale, ranging from 0 (never) to 3 (nearly every day), and scores ranging between 0 and 27. Internal consistency was good ($\alpha = 0.82$, 95 % CI [0.77, 0.86]).

Resilience-related internal assets were measured with the internal resources subscale of the Healthy Kids Resilience Assessment Module (HKRAM; Constantine & Benard, 2001; Martins, 2005). This subscale has 18 items related to six domains, with three items each: empathy, communication, self-awareness, achievement motivation, problem-solving, and self-efficacy, which are the positive developmental outcomes of asset-rich environments. All were answered on a 5-point scale, ranging from 1 (Never) to 5 (Always). Higher values represent higher resilience-related internal assets. Good internal consistency was obtained ($\alpha = 0.83$, 95 % CI [0.79, 0.87]).

SE was measured through the *Student Engagement Scale* developed from an international study with 12 countries (Lam et al., 2014). SES has 33 items related to affective (nine items; e.g., “I am very interested in learning.”), behavioral (12 items; e.g., “When I’m in class, I participate in class activities.”), and cognitive engagement (12 items; e.g., “I try to understand how the things I learn in school fit together with each other.”), all answered on a 5-point scale, ranging from 1 (Strongly disagree/Always) to 5 (Strongly agree/Never). Higher scores reflect higher SE (Lam et al., 2014). Good internal consistency was obtained ($\alpha = 0.93$, 95 % CI [0.91, 0.95]).

2.3. Procedure

The ISCTE-University Institute of Lisbon Ethics Committee (ref. 17/2019) approved all procedures. A list of the residential care homes for young people in the metropolitan region of Lisbon was made. Then, the principal investigator (PI) made initial contact with the residential care homes via email and, when necessary, followed up via telephone a week later. The nine institutions that were willing to participate were invited to a meeting (face-to-face or phone call) to explain the study and the exclusion criteria (i.e., children under ten years old and those with cognitive difficulties that could compromise the questionnaire understanding were excluded). Data collection with participants living with parents was performed at schools. The procedure was similar since the PI made initial contact with the schools via email and telephone, and followed up every two weeks. After an agreement, the PI and the directory boards had a meeting, randomized the classes, and scheduled the data collection. The survey was also distributed through social networks to reach university students. In total, data was collected in person and online at one university, three public school groups, and four residential care facilities. Data from participants under 18 years old was only collected in the presence of the PI (either at schools or residential care homes), who would give verbal instructions on how to complete the survey, answer any question, and offer to read the instructions and questions aloud to minimize potential differences in reading proficiency levels. Informed consent was obtained from all participants and parents or legal custodians of those under 18 years old. For ethical purposes, the school directors kept the physically signed consent forms in safe-deposit boxes. The data collection took place between April and December 2019, with the questionnaire taking about 15 to 25 min to complete.

2.4. Data analysis

Data analyses were performed with IBM SPSS Statistics (Version 26.0). The percentage of missing values across the 68 variables varied between 0.8 % and 7.5 %. In total, 19 out of 120 cases (15.83 %) were incomplete. Sociodemographic data, such as age, gender, school year, and nationality, were not imputed, considering that these are concepts themselves and not part of a concept (Lodder,

2014). These variables would only serve to characterize our sample and not to include in the regression analysis, although they were used in the imputation model as predictors. The multiple imputation method (MI) was used for the other variables since it is described as the preferred missing data handling technique (Graham, 2009). We used MI to create and analyze five multiply imputed datasets. Incomplete variables were imputed under fully conditional specification (Markov chain Monte Carlo method), with ten iterations maximum for each imputation as recommended (Reiter & Raghunathan, 2007). Results from the five datasets were pooled.

All variables were checked for data inaccuracy. Statistical assumptions for all statistical tests were verified to ensure no violation. The significance level was set at $p < .05$. Confidence intervals for reliability were calculated with intraclass correlation coefficient as Baumgartner and Chung (2001) suggested. *t*-tests for independent samples were used to analyze the differences between the groups (i. e., youth living with parents and in a residential care home). Bivariate Pearson linear correlations were computed to analyze the associations between the variables for the total sample and between groups. Hierarchical multiple linear regression (HMLR) analysis was used to understand the role of resilience-related internal assets, SE, and PSS in truancy while controlling for living in a residential care home or with their parents, school grade retention, and depression. The effect size for multiple regression was calculated and interpreted according to Cohen's (1988) guidelines, $f^2 \geq 0.02$, $f^2 \geq 0.15$, and $f^2 \geq 0.35$ represent small, medium, and large effect sizes, respectively.

3. Results

As shown in Table 1, groups did not differ on sociodemographic variables, showing their equivalence. Additionally, no differences between groups were found regarding PSS and resilience internal assets ($p > .05$), with participants reporting levels slightly above the mean (Min-Max = 1–4, $M = 2.68$, $SE = 0.06$) for PSS and mild levels (Min-Max = 1–5, $M = 3.10$, $SE = 0.04$) for resilience. On the contrary, our results show differences in the other outcomes, meaning that participants living in residential care reported more unexcused school absences, more school grade retentions, higher levels of depression, and lower SE ($ps < .01$). To note that overall engagement and depression scores are mild.

The analysis of the pooled correlation results between all variables across both groups can be found in the supplemental material. As expected, and despite the weak to moderate values, truancy showed a positive association with grade retention ($r = 0.34$, $p < .01$) and depression ($r = 0.29$, $p < .01$), with grade retention also being positively associated with depression ($r = 0.21$, $p < .05$). These associations mean that students that have experienced school retention more often, as well as reporting more symptoms of depression were also more prone to skipping school.

In contrast, truancy was negatively associated with PSS ($r = -0.33$, $p < .01$), resilience internal assets ($r = -0.32$, $p < .01$), and SE ($r = -0.27$, $p < .01$). Likewise, depression showed negative weak associations with resilience ($r = -0.28$, $p < .01$) and SE ($r = -0.21$, $p < .05$), and grade retention showed negative weak associations with resilience ($r = -0.20$, $p < .05$), PSS ($r = -0.20$, $p < .05$) and SE ($r = -0.16$, $p < .05$). This means that students with higher engagement, resilience and perception of success are more likely to attend classes, not fail school grades or experience depression symptoms. Moreover, SE showed a moderate positive association both with resilience internal assets ($r = 0.37$, $p < .01$) and PSS ($r = 0.36$, $p < .01$). Resilience and PSS were also positively associated ($r = 0.22$, $p < .05$), meaning that students with higher internal resources and a positive perception of their school success tend to be more academically engaged.

An analysis of the correlations by group (see Table 2) shows differences in some relations that must be reported. For instance, moderate positive associations between truancy and grade retention ($r = 0.34$, $p < .01$), truancy and depression ($r = 0.43$, $p < .01$) and negative association between PSS and depression ($r = -0.43$, $p < .01$) are only present in the group of students that live with parents. On the contrary, there is only a moderate negative association between truancy and PSS ($r = -0.44$, $p < .01$) and a positive moderate association between resilience-related internal assets and SE ($r = 0.42$, $p < .01$) in the group of students living in residential care.

Despite the association between PSS and SE being significant in both groups, there was a moderate association in those living in residential care ($r = 0.47$, $p < .01$) and a weak association for those living with parents ($r = 0.28$, $p < .01$), meaning that PSS might be more associated with SE for those in residential care.

3.1. Truancy

Hierarchical multiple linear regression analysis was run with truancy as the dependent variable. Living in a residential care home or with parents and school grade retention was entered as the first set of variables focusing on demographics. Depression symptoms were

Table 2
Pearson correlations as function of with whom the participants live (parents or residential care).

Variables	1	2	3	4	5	6
1. Truancy	–	0.34**	0.43**	–0.14	–0.26	–0.37**
2. School grade retention	0.19	–	–0.00	–0.01	–0.26*	–0.28*
3. Depression	0.13	0.18	–	–0.10	–0.43**	–0.23
4. Student engagement	–0.25	–0.10	–0.18	–	0.28*	0.24
5. Perception of school success	–0.44**	–0.26*	–0.08	0.47**	–	0.15
6. Resilience internal assets	–0.27*	–0.10	–0.28*	0.42**	0.28*	–

Note. Correlations for participants living with both parents are presented above the diagonal and correlations for participants living in residential care are presented below the diagonal; ** $p < .05$, *** $p < .01$.

included in Step 2, and finally, resilience-related internal assets, SE, and PSS were included in Step 3.

At Step 1, the demographic variables accounted for 15 % of the variance, with both variables making a significant contribution ($R^2 = 0.15$, $F(2, 115) = 10.49$, $p < .001$). Students who live in residential care ($\beta = 0.21$, $p < .05$) and have failed school previously ($\beta = 0.26$, $p < .01$) are more prone to truancy. Beyond the variance explained at Step 1, school grade retention ($\beta = 0.24$, $p < .05$) and depression ($\beta = 0.20$, $p < .05$), made a significant contribution to this model, explaining 18 % of the variance in average at Step 2 ($R^2 = 0.19$, $F(3, 114) = 8.88$, $p < .001$). At step 3, the model increased the explained variance of truancy to 29 % ($R^2 = 0.29$, $F(6, 111) = 7.74$, $p < .001$), with PSS (-0.25 , $p < .01$) and resilience internal assets (-0.18 , $p < .01$) making a significant contribution to this model, with a medium effect size. SE was not significant, despite being significantly associated at the bivariate level. Living in residential care also remained significant through this final step, while school grade retention and depression symptoms did not (see Table 3).

4. Discussion

The present study examined the relevance of resilience-related internal assets, student engagement (SE), and perception of school success (PSS) in young student's school trajectories and their association with truancy among those living in residential care or with their parents.

Overall, results indicated that truancy was positively associated with school grade retention and depression and negatively associated with SE, PSS, and resilience internal assets. These results are in accordance with our hypothesis since participants living in residential care reported more unexcused school absenteeism or truancy, more grade retention, higher depression, and lower SE. Previous studies have also shown the negative impact of school absenteeism, including an increase in students' likelihood of year retention (e.g., Cabus & De Witte, 2015; Gottfried, 2014; Smerillo et al., 2018) and a lowering of their SE (Keppens & Spruyt, 2020). For young people living with parents, moderate positive associations were also found between depression and truancy, and negative associations between depression and PSS. The association between truancy and depression is frequently reported in the literature, which presents depression as a significant risk factor for truancy (e.g., Askeland et al., 2020; Finning et al., 2019; González et al., 2018). In this sense, educational agents must be aware of this phenomenon, considering that missing classes can also be an explicit behavior that reveals emotional suffering.

In the comparative analysis between groups of young people living with parents and in residential homes, moderate positive associations were observed between truancy and school grade retention in the group living with parents. In contrast, among students living in residential care, there was a non-significant association, meaning that for these students, truancy might be better explained by other variables. Our model suggested that students living in residential care are less likely to skip classes when they perceive themselves as successful students. Based on a meta-analytic review by Gubbels et al. (2019), a negative attitude towards school emerged as the most relevant factor for school absenteeism, and a negative attitude might be increased when students feel low self-efficacy, thus feeling not successful. The same meta-analysis also stated other relevant risk factors of school absenteeism, such as reduced parent-school engagement, substance abuse, and internalizing and externalizing problems. These factors are more likely to be experienced by young people living in residential care.

Additionally, another study pointed out that foster caregivers' involvement with the school was associated with student cognitive engagement (i.e. students' motivation, implication, and effort towards academic activities). However, it was not associated with the students' future expectations or the quality of relationships at school (Mihalec-Adkins et al., 2020). Therefore, it is important for students to build a solid and positive relationship with education as they grow. Furthermore, a positive view of school must be modeled and mediated by their principal caregivers since students who are engaged and see value in their education are less likely to experience truancy (Gentle-Genitty, 2009).

It must be highlighted that a moderate positive association was found between resilience internal assets and engagement in young people living in residential care settings. This correlation is in line with a systematic literature review of resilience and resilience factors in children living in residential care that revealed the impact of resilience on SE (Lou et al., 2018). Moreover, a literature review regarding interventions to prevent truancy concluded that truant students could benefit the most from interventions related to the SE perspective (Keppens & Spruyt, 2020). Because SE is related to continuing one's education beyond compulsory school (Wang & Eccles,

Table 3
Hierarchical regression analysis predicting truancy.

	Regression 1			Regression 2			Regression 3		
	B	SE	β	B	SE	β	B	SE	β
Living in residential care	0.27	0.12	0.21*	0.22	0.12	0.16	0.30	0.13	0.22*
School grade retention	0.14	0.05	0.26**	0.13	0.05	0.24*	0.08	0.05	0.14
Depression symptoms				0.02	0.01	0.20*	0.01	0.01	0.10
Student engagement							-0.02	0.10	-0.02
Perception of school success							-0.24	0.09	-0.25**
Resilience internal assets							-0.29	0.15	-0.18*
R^2		0.15			0.19			0.29	
Adjusted R^2		0.14			0.17			0.25	
F		10.49***			8.88***			7.64***	
Cohen's f^2		18			23			29	

Note. $n = 118$, * $p < .05$, ** $p < .01$, *** $p < .001$, Living in residential care: 0 = with parents; 1 = residential care home.

2012), it is especially relevant for those in residential homes, who are more prone to have minor academic qualifications than their peers (Erdei & Kovács, 2020; Garcia-Molsosa et al., 2021). A factor that must give hope to all professionals working with vulnerable children and youth is that research has pointed out that both engagement (Fredricks et al., 2016) and social and emotional competencies are amenable to change (e.g., Greenberg et al., 2017; Taylor et al., 2017).

Our results also showed that students who perceive themselves as successful students and score higher in resilience assets are more engaged with school and learning and are less likely to miss school. According to our results, this is especially relevant for those in residential care. It is, therefore, very important to work with vulnerable youth to increase their PSS along with social and emotional competencies, namely self-awareness and self-management. Moreover, a study with first-year university students showed that perceived academic success was related to prior academic achievement and satisfaction with what is being taught, study time, and the approach to learning (Valadas et al., 2017). In this regard, residential care homes should have places dedicated to studying and staff to guide them in their learning methods, study approaches, and school motivations. Empowering vulnerable youth must occur through healthy relationships with adults who know their strengths, foster their social and emotional skills, and help them flourish. Research also shows that services for at-risk youth, such as welfare, education or mental health support that use a positive strengths development model are associated with resilience increase (Sanders et al., 2015).

In regard to schools, we have considered the Sir Ken Robinson perspective (Robinson & Aronica, 2016), known for defending the need for school's transformation, namely as a space for creative exploration so that everyone can create and succeed. Based on their perspective, we propose that educational institutions provide students with opportunities to develop their full potential. Schools and universities can be involved by fostering healthy relationships between peers and between teachers and students, as well as supporting collaborative learning projects based on students' inner motivations and capacities. If educational institutions use this model of action, coupled with the assumption that all areas of study are equally relevant, more students might have more opportunities to experience the success that is valued by their community. Consequently, there is the potential for SE to be maintained or increased. And with these transformations, we will be closer to affirming that no child is left behind.

Since resilience is a dynamic, interactive, and multisystemic process, both external and internal assets must be enhanced (Southwick et al., 2014; Ungar, 2018). Universal school-based SEL programs can affect not only the individual but the surrounding systems, namely the class, school, and community climate, reinforcing positive relationships that can support those in more vulnerable conditions (Greenberg et al., 2017). Moreover, selective interventions should be considered, taking children and youth in residential care into account, since they are at a higher risk exposure. These selective interventions consist of specialized programs that might offer conceptual models that are more adjusted to their needs, as well as being implemented with higher intensity and focus compared to universal interventions (Greenberg et al., 2017).

Before concluding, some limitations must be taken into consideration. Firstly, the cross-sectional study format limits the possibility of understanding directions of influence. Second, PSS relied on a single-item response. Third, our sample is reduced, which obliges us to be cautious when making assumptions about the observed results. We have invited all residential youth care homes in the Lisbon Metropolitan area, though few were responsive. Besides rejection or absence of answers, some potential youngsters had learning difficulties that could influence their understanding of the questionnaire and were also excluded, thus reducing the number of participants per home and our sample overall. Finally, the reduced number of institutions involved might introduce a potential bias in our sample. Thus, future studies should replicate our findings with a larger and more diverse sample.

Our study highlights the role of resilience-related internal assets, PSS, and SE as being associated with fewer instances of truancy. Our results also reinforce the need to adopt different methods and strategies to promote positive development in youth, depending on the context in which students live. In conclusion, if we focus on the integrative and conceptual model of healthy and positive adolescent development (Kia-Keating et al., 2011), we think that young people living in residential support could benefit from a resilience-based approach, and the group living with their parents from a promotion-based approach. Both groups could benefit from universal school-based promotion and prevention SEL programs, enhancing each person's most positive inner resources and creating opportunities for each student to experience a successful academic path. This will ultimately lead to an increase in SE and, consequently, a decrease in truancy.

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.chiabu.2022.105819>.

Data sharing and declaration

The dataset analyzed during the current study is not publicly available but is available from the corresponding author on request.

CRedit authorship contribution statement

Conceptualization and Methodology: A.C. Santos, C. Simões and P. Arriaga; Investigation, data curation and project administration: A.C. Santos; Formal analysis: A.C. with the supervision of C. Simões. Writing - original draft preparation: A.C. Santos and C. Branquinho; Writing - review & editing: C. Simões and P. Arriaga.

Declarations of competing interest

None.

Data availability

Data will be made available on request.

Acknowledgements

The Portuguese National Foundation for Science and Technology (FCT-MCTES) funded this study through the PhD grant SFRH/BD/126304/2016 attributed to A.C. Santos. The authors would also like to acknowledge Raquel Lopes and Adriano Mendes for collaborating at data collection, the great effort from Eunice Freitas, Sara Santos, Guilherme Heneni and Joana Alegrete for their help in typing hardcopy surveys to the database. Also, the great support of the residential childcare institutions and the schools involved: Santa Casa da Misericórdia de Lisboa, Santa Casa da Misericórdia de Cascais, Fundação Ardina and Lar Maria Droste, Agrupamento de Escolas de Benavente, Agrupamento de Escolas de Vialonga and Escola Secundária Camões.

References

- Askeland, K. G., Bøe, T., Lundervold, A. J., Stormark, K. M., & Hysing, M. (2020). The association between symptoms of depression and school absence in a population-based study of late adolescents. *Frontiers in Psychology, 11*(June), 1–12. <https://doi.org/10.3389/fpsyg.2020.01268>
- Baumgartner, T. A., & Chung, H. (2001). Confidence limits for intraclass reliability coefficients. *Measurement in Physical Education and Exercise Science, 5*(3), 179–188. https://doi.org/10.1207/S15327841MPEE0503_4
- Bethell, C. D., Newacheck, P., Hawes, E., & Halfon, N. (2014). Adverse childhood experiences: Assessing the impact on health and school engagement and the mitigating role of resilience. *Health Affairs, 33*(12), 2106–2115. <https://doi.org/10.1377/hlthaff.2014.0914>
- Cabus, S. J., & De Witte, K. (2015). Does unauthorized school absenteeism accelerates the dropout decision? – evidence from a Bayesian duration model. *Applied Economics Letters, 22*(4), 266–271. <https://doi.org/10.1080/13504851.2014.937031>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum.
- Constantine, N., & Benard, B. (2001). *California healthy kids survey resilience assessment module technical report*. <http://crahd.phi.org/projects/hkratech.pdf>
- Dixon, D. D., & Stevens, D. (2018). A potential avenue for academic success: Hope predicts an achievement-oriented psychosocial profile in African American adolescents. *Journal of Black Psychology, 44*(6), 532–561. <https://doi.org/10.1177/0095798418805644>
- Eaton, D. K., Brener, N., & Kann, L. K. (2008). Associations of health risk behaviors with school absenteeism. Does having permission for the absence make a difference? *Journal of School Health, 78*(4), 223–229. <https://doi.org/10.1111/j.1746-1561.2008.00290.x>
- Erdei, I., & Kovács, K. E. (2020). The statistical analysis of the academic achievement of young people living in the child protection system. *Central European Journal of Educational Research, 2*(3), 29–38. <https://doi.org/10.37441/CEJER/2020/2/3/8527>
- Ferreira, T., Sousa, M., & Salgado, J. (2018). Brief assessment of depression: Psychometric properties of the Portuguese version of the patient health questionnaire (PHQ-9). *The Psychologist: Practice & Research Journal, 1*(2), 1–15. <https://doi.org/10.33525/pprj.v1i2.36>
- Finning, K., Ukoumunne, O. C., Ford, T., Danielsson-Waters, E., Shaw, L., Romero De Jager, I., Stentiford, L., & Moore, D. A. (2019). The association between child and adolescent depression and poor attendance at school: A systematic review and meta-analysis. *Journal of Affective Disorders, 245*(November 2018), 928–938. <https://doi.org/10.1016/j.jad.2018.11.055>
- Fredricks, J. A. (2015). Academic engagement. In (Second Edi), Vol. 1. *International encyclopedia of the social & behavioral sciences: Second edition*. Elsevier. <https://doi.org/10.1016/B978-0-08-097086-8.26085-6>
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*, 59–109. <https://doi.org/10.3102/00346543074001059>
- Fredricks, J. A., Filsecker, M., & Lawson, M. A. (2016). Student engagement, context, and adjustment: Addressing definitional, measurement, and methodological issues. *Learning and Instruction, 43*, 1–4. <https://doi.org/10.1016/j.learninstruc.2016.02.002>
- Garcia-Molsosa, M., Collet-Sabé, J., & Montserrat, C. (2021). The school experience of children in residential care: A multiple case study. *Child & Family Social Work, 26*(1), 1–10. <https://doi.org/10.1111/cfs.12784>
- Gentle-Genitty, C. (2009). *Tracking more than absences: Impact of school's social bonding on chronic truancy*. LAP Lambert Academic Publishing. <https://doi.org/10.1037/e625252012-001>
- González, C., Kearney, C. A., Jiménez-Ayala, C. E., Sanmartín, R., Vicent, M., Inglés, C. J., & García-Fernández, J. M. (2018). Functional profiles of school refusal behavior and their relationship with depression, anxiety, and stress. *Psychiatry Research, 269*(June), 140–144. <https://doi.org/10.1016/j.psychres.2018.08.069>
- Gottfried, M. A. (2014). Chronic absenteeism and its effects on students' academic and socioemotional outcomes. *Journal of Education for Students Placed at Risk, 19*(2), 53–75. <https://doi.org/10.1080/10824669.2014.962696>
- Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology, 60*(1), 549–576. <https://doi.org/10.1146/annurev.psych.58.110405.085530>
- Greenberg, M. T., Domitrovich, C. E., Weissberg, R. P., & Durlak, J. A. (2017). Social and emotional learning as a public health approach to education. *Future of Children, 27*(1), 13–32. <https://doi.org/10.1353/foc.2017.0001>
- Gubbels, J., van der Put, C. E., & Assink, M. (2019). Risk factors for school absenteeism and dropout: A meta-analytic review. *Journal of Youth and Adolescence, 48*(9), 1637–1667. <https://doi.org/10.1007/s10964-019-01072-5>
- Guntern, S., Korpershoek, H., & van der Werf, G. (2017). Benefits of personality characteristics and self-efficacy in the perceived academic achievement of medical students. *Educational Psychology, 37*(6), 733–744. <https://doi.org/10.1080/01443410.2016.1223277>
- Hair, J., Black, W., Babin, B., & Anderson, R. (2014). *Multivariate data analysis* (7th ed.). Pearson Education Limited.
- Hanson, T. L., & Kim, J.-O. (2007). Measuring resilience and youth development: the psychometric properties of the Healthy Kids Survey. In *Issues & Answers Report, REL 2007–No. 034*. <https://doi.org/10.1037/e607962011-001>
- Inchley, J., Currie, D., Budisavljevic, S., Torsheim, T., Jästad, A., Cosma, A., et al. (2020). Spotlight on adolescent health and well-being. Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada. In *International report. Volume 1. Key findings*.
- Kearney, C. A. (2016). Managing school absenteeism at multiple tiers. *Oxford University Press*. <https://doi.org/10.1093/med:psych/9780199985296.001.0001>
- Kearney, C. A., González, C., Graczyk, P. A., & Fornander, M. J. (2019). Reconciling contemporary approaches to school attendance and school absenteeism: Toward promotion and nimble response, global policy review and implementation, and future adaptability (Part 1). *Frontiers in Psychology, 10*(2222). <https://doi.org/10.3389/fpsyg.2019.02222>
- Keppens, G., & Spruyt, B. (2020). The impact of interventions to prevent truancy: A review of the research literature. *Studies in Educational Evaluation, 65*(September 2019), Article 100840. <https://doi.org/10.1016/j.stueduc.2020.100840>
- Khawaja, N. G., Ibrahim, O., & Schweitzer, R. D. (2017). Mental well-being of students from refugee and migrant backgrounds: The mediating role of resilience. *School Mental Health, 9*(3), 284–293. <https://doi.org/10.1007/s12310-017-9215-6>
- Kia-Keating, M., Dowdy, E., Morgan, M. L., & Noam, G. G. (2011). Resilience and resilience factors in children in residential care: A systematic review. *Journal of Adolescent Health, 48*(3), 220–228. <https://doi.org/10.1016/j.jadohealth.2010.08.006>
- Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606–613. <https://doi.org/10.1046/j.1525-1497.2001.016009606.x>

- Kulig, T. C., Cullen, F. T., Wilcox, P., & Chouhy, C. (2019). Personality and adolescent school-based victimization: Do the big five matter? *Journal of School Violence, 18*(2), 176–199.
- Lam, S., Jimerson, S., Wong, B. P. H. H., Kikas, E., Shin, H., Veiga, F. H., Hatzichristou, C., Polychroni, F., Cefai, C., Negovan, V., Stanculescu, E., Yang, H., Liu, Y., Basnett, J., Duck, R., Farrell, P., Nelson, B., & Zollneritsch, J. (2014). Understanding and measuring student engagement in school: The results of an international study from 12 countries. *School Psychology Quarterly, 29*(2), 213–232. <https://doi.org/10.1037/spq0000057>
- Lei, H., Cui, Y., & Zhou, W. (2018). Relationships between student engagement and academic achievement: A meta-analysis. *Social Behavior and Personality, 46*(3), 517–528. <https://doi.org/10.2224/sbp.7054>
- Lodder, P. (2014). To impute or not impute: That's the question. In G. J. Mellenbergh, & H. J. Adèr (Eds.), *Advising on research methods: Selected topics 2013* (pp. 0–1). Johannes van Kessel Publishing. http://www.paultwin.com/wp-content/uploads/Lodder_1140873_Paper_Imputation.pdf.
- Lou, Y., Taylor, E. P., & Di Folco, S. (2018). Resilience and resilience factors in children in residential care: A systematic review. *Children and Youth Services Review, 89* (November 2017), 83–92. <https://doi.org/10.1016/j.childyouth.2018.04.010>
- Martins, M. H. (2005). *Contribuição para a análise de crianças e jovens em risco/resiliência e desenvolvimento. [Contribution to the analysis of children and youth at risk/resilience and development.]* Universidade do Algarve.
- Masten, A. S. (2011). Resilience in children threatened by extreme adversity: Frameworks for research, practice, and translational synergy. *Development and Psychopathology, 23*(02), 493–506. <https://doi.org/10.1017/S0954579411000198>
- Masten, A. S., & Barnes, A. (2018). Resilience in children: Developmental perspectives. *Children, 5*, 98. <https://doi.org/10.3390/children5070098>
- Matos, M. G., Gina, T., Guedes, F. B., Branquinho, C., Gaspar, S., Reis, M., Ramiro, L., Cerqueira, A., Loureiro, N., Carvalho, M., Camacho, I., Ferreira, C., Marques, A., Simões, C., & Gaspar, T. (2018). A saúde dos adolescentes portugueses após a recessão -. In *Dados nacionais do estudo HBSC 2018 [The health of Portuguese adolescents after the recession - National data from the HBSC 2018 study]*. Internacional 2020.pdf.
- Maynard, B. R., Salas-Wright, C. P., Vaughn, M. G., & Peters, K. E. (2012). Who are truant youth? Examining distinctive profiles of truant youth using latent profile analysis. *Journal of Youth and Adolescence, 41*(12), 1671–1684. <https://doi.org/10.1007/s10964-012-9788-1>
- Mihalec-Adkins, B. P., Christ, S. L., & Day, E. (2020). An exploration of placement-related psychosocial influences on school engagement among adolescents in foster care. *Children and Youth Services Review, 108*(July 2019), Article 104616. <https://doi.org/10.1016/j.childyouth.2019.104616>
- Padesky, C. A., & Mooney, K. A. (2012). Strengths-based cognitive-behavioural therapy: A four-step model to build resilience. *Clinical Psychology & Psychotherapy, 19* (4), 283–290. <https://doi.org/10.1002/cpp.1795>
- Pietarinen, J., Soini, T., & Pyhältö, K. (2014). Students' emotional and cognitive engagement as the determinants of well-being and achievement in school. *International Journal of Educational Research, 67*, 40–51. <https://doi.org/10.1016/j.ijer.2014.05.001>
- Reiter, J. P., & Raghunathan, T. E. (2007). The multiple adaptations of multiple imputation. *Journal of the American Statistical Association, 102*(480), 1462–1471. <https://doi.org/10.1198/016214507000000932>
- Robinson, S. K., & Aronica, L. (2016). *Creative schools: The grassroots revolution that's transforming education*. Penguin Books.
- Salmela-Aro, K., & Read, S. (2017). Study engagement and burnout profiles among Finnish higher education students. *Burnout Research, 7*(November), 21–28. <https://doi.org/10.1016/j.burn.2017.11.001>
- Sanders, J., Munford, R., Thimasarn-Anwar, T., Liebenberg, L., & Ungar, M. (2015). The role of positive youth development practices in building resilience and enhancing well-being for at-risk youth. *Child Abuse and Neglect, 42*, 40–53. <https://doi.org/10.1016/j.chiabu.2015.02.006>
- Santibañez, L., & Guarino, C. M. (2021). The effects of absenteeism on academic and social-emotional outcomes: Lessons for COVID-19. *Educational Researcher, 50*(6), 392–400. <https://doi.org/10.3102/0013189X21994488>
- Santos, A. C., Arriaga, P., Daniel, J. R., Cefai, C., Melo, M. H. S., Psyllou, A., Shieh, J., Schutte, N., David, C. H., Azevedo, M. C., Andreou, E., Caetano, A., Arriaga, P., Daniel, J. R., Cefai, C., Melo, M. H. S., Psyllou, A., Shieh, J., Schutte, N., Social, C. S., ... (2022). Social and emotional competencies as predictors of student engagement in youth: a cross-cultural multilevel study. *Studies in Higher Education, 1–19*. <https://doi.org/10.1080/03075079.2022.2099370>
- Santos, A. C., Simões, C., Cefai, C., Freitas, E., & Arriaga, P. (2021). Emotion regulation and student engagement: Age and gender differences during adolescence. *International Journal of Educational Research. https://doi.org/10.1016/j.ijer.2021.101830*
- Santos, A. C., Simões, C., Lebre, P., & Matos, M. (2019). Autoeficácia e outras questões psicossociais: como se sentem os adolescentes portugueses [Self-efficacy and other psychosocial issues: how Portuguese adolescents feel]. *Revista de Psicologia Da Criança e Do [Adolescent Child and Adolescent Psychology], 10*(1), 51–61.
- Sevil-Gülen, O., & Demir, A. (2021). Resilience in socioeconomically disadvantaged Turkish adolescents: An ecological perspective. *Youth & Society, 53*(7), 1132–1151. <https://doi.org/10.1177/0044118X20959535>
- Sim, F., Li, D., & Chu, C. M. (2016). The moderating effect between strengths and placement on children's needs in out-of-home care: A follow-up study. *Children and Youth Services Review, 60*(November), 101–108. <https://doi.org/10.1016/j.childyouth.2015.11.012>
- Simões, C., Matos, M., Aspa, G., & Morgan, A. (2015). Facing the adversity: The role of internal assets on well-being in adolescents with special needs. *The Spanish Journal of Psychology, 18*, Article E56. <https://doi.org/10.1017/sjp.2015.41>
- Smerillo, N. E., Reynolds, A. J., Temple, J. A., & Ou, S. (2018). Chronic absence, eighth-grade achievement, and high school attainment in the Chicago Longitudinal Study. *Journal of School Psychology, 67*(November 2017), 163–178. <https://doi.org/10.1016/j.jsp.2017.11.001>
- Soetan, T. O. (2020). Effect of provision and utilization of support areas on international students' perceived academic success. In V. Tavares (Ed.), *Multidisciplinary perspectives on international student experience in Canadian higher education* (pp. 265–290). IGI Global.
- Southwick, S. M., Bonanno, G. A., Masten, A. S., Panter-Brick, C., & Yehuda, R. (2014). Resilience definitions, theory, and challenges: Interdisciplinary perspectives. *European Journal of Psychotraumatology, 5*, 25338. <https://doi.org/10.3402/ejpt.v5.25338>
- Taylor, R. D., Oberle, E., Durlak, J. A., & Weissberg, R. P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: A meta-analysis of follow-up effects. *Child Development, 88*(4), 1156–1171. <https://doi.org/10.1111/cdev.12864>
- Ungar, M. (2018). Systemic resilience: Principles and processes for a science of change in contexts of adversity. *Ecology and Society, 23*(4). <https://doi.org/10.5751/ES-10385-230434>
- Ungar, M., Connelly, G., Liebenberg, L., & Theron, L. (2019). How schools enhance the development of young people's resilience. *Social Indicators Research, 145*(2), 615–627. <https://doi.org/10.1007/s11205-017-1728-8>
- Ungar, M., Russell, P., & Connelly, G. (2014). School-based interventions to enhance the resilience of students. *Journal of Educational and Developmental Psychology, 4* (1). <https://doi.org/10.5539/jedp.v4n1p66>
- U.S. Department of Education, & Office for Civil Rights. (2019). *Chronic Absenteeism in the Nation's Schools: A hidden educational crisis*. U.S. Department of Education. <https://www2.ed.gov/datastory/chronicabsenteeism.html>.
- Valadas, S. T., Almeida, L. S., & Araújo, A. M. (2017). The mediating effects of approaches to learning on the academic success of first-year college students. *Scandinavian Journal of Educational Research, 61*(6), 721–734. <https://doi.org/10.1080/00313831.2016.1188146>
- Virtanen, T. E., Lerkkanen, M. K., Poikkeus, A. M., & Kuorelahti, M. (2018). Student engagement and school burnout in Finnish lower-secondary schools: Latent profile analysis. *Scandinavian Journal of Educational Research, 62*(4), 519–537. <https://doi.org/10.1080/00313831.2016.1258669>
- Wang, M.-T., & Eccles, J. S. (2012). Adolescent behavioral, emotional, and cognitive engagement trajectories in school and their differential relations to educational success. *Journal of Research on Adolescence, 22*(1), 31–39. <https://doi.org/10.1111/j.1532-7795.2011.00753.x>
- Wang, M.-T., & Hofkens, T. L. (2020). Beyond classroom academics: A school-wide and multi-contextual perspective on student engagement in school. *Adolescent Research Review, 5*(4), 419–433. <https://doi.org/10.1007/s40894-019-00115-z>