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# The role of socio-emotional security on school engagement and academic achievement: systematic literature review

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**Introduction:** Socio-emotional security and particularly secure attachment relationships with parents and peers have been associated with positive developmental outcomes, including school-related variables. This systematic literature review aims to provide a comprehensive analysis of the literature, exploring the relationship between socio-emotional security (attachment, support, and secure relations with parents and peers) and academic achievement, school engagement, and early school dropout.

**Methods:** The inclusion criteria were studies with socio-emotional security as the independent variable and academic achievement and/or school engagement as the dependent variable, using a quantitative methodology, written in English. The exclusion criteria were articles presenting literature review or meta-analysis, interventions or instrument validation studies, studies with a qualitative approach, studies developed in an e-learning context, studies with university students, and/or focused on schooling in extreme conditions (e.g., COVID-19). PRISMA guidelines were followed, through a search that resulted in the identification of 38 empirical quantitative studies, published between 2018 and 2022, in English.

**Results and discussion:** The results revealed that parent and peer relationships impact students' academic achievement and school engagement, as expected, and highlighted the relevance of parental and peer relationships for school-related outcomes. Future research should consider the role of potential mediators and moderators in the relationship between socio-emotional security and school outcomes.

## KEYWORDS

socio-emotional security, parents, peers, school engagement, academic achievement

## Introduction

Socio-emotional security refers to the sense of safety that individuals experience in their social environments, including the sense of emotional safety, social support and belonging to a group. Secure relationships with parents, characterized by a sense of trust, emotional support, and effective communication, have been linked to positive developmental outcomes in various domains, including the way children get integrated and cope with challenges in the school context (Kennedy and Kennedy, 2004), as well as how they perform at school tasks (Bergin and Bergin, 2009; DeMulder et al., 2000). Furthermore, children with a secure attachment with their parents tend to demonstrate higher levels of

school engagement, such as active participation in classroom activities, better peer relationships, and increased motivation to learn (Hughes et al., 2008). Several mechanisms may contribute to the association between attachment to parents and academic outcomes. For example, van IJzendoorn et al. (1995) found in a meta-analysis that secure children tend to be less concerned, and their attachment system is activated less frequently, allowing higher levels of concentration and attention in academic tasks, in the classroom, or when doing homework.

In addition to research on the impact of parent–child attachment security on school performance and engagement, the role of attachment to peers in children’s school experiences has also been explored by the literature. As developmental psychology research shows, peers become increasingly important during early childhood and throughout the school years, as children spend a significant time interacting and establishing relationships within the peer group (Rubin et al., 2006). Attachment to peers refers to the quality of emotional bonds and close friendships children form with their peers (Lieberman et al., 1999). Secure peer relationships are associated with positive developmental outcomes in various areas of children’s functioning, including their academic achievement (e.g., Mikami et al., 2010). Furthermore, positive peer relationships contribute to a supportive learning environment, promoting engagement, cooperation, and the development of social and emotional skills necessary for school success (Wentzel, 2015).

The relatedness principle of attachment theory has been included in other relevant theoretical frameworks such as the Socio-Ecological Theory (e.g., Bronfenbrenner and Morris, 2006), Self-Determination Theory (Ryan and Deci, 2020), Positive Parenting Theories (Bornstein, 2019; Sanders et al., 2003), or Social Goal Theory (Wentzel, 2015). In turn, these theories have also concerned about the impact of the relational quality and support on educational outcomes, considering that school performance and school engagement demand a multi-factorial approach, including individual, relational, contextual, and socio-political variables. Thus, the study of the relational dimension is crucial to support practices within the school context that allow the promotion of school engagement and academic achievement, and the prevention of early school dropout through the development of targeted interventions based on the promotion of secure relationships with parents and peers. However, the systematization of the impact of the relational quality and support on educational outcomes remains unclear and inconsistent.

Considering this broad perspective on parents’ and peers’ relationship quality and support – integrating the contribution from different theoretical models –, the present systematic literature review aims to synthesize recent published evidence on the association between socio-emotional security and school outcomes, namely academic achievement, school engagement, and early school dropout, from preschool to second-chance schools. This review, focusing on articles published between 2018 and 2022, intends to integrate a comprehensive perspective, supported by recent empirical studies, on the role of these relational dimensions with parents and peers on key educational outcomes. The use of the five-year timeframe for this review ensures a focus on current relevance, as well as a manageable scope, considering the vast literature on the subject.

## Methods

### Objectives

The goals of this systematic literature review were to synthesize evidence support for the association between socio-emotional security with parents and peers and: (a) academic achievement; (b) school engagement; (c) early school dropout.

### Search strategy

The search strategy followed the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guidelines. PRISMA guidelines intend to contribute to a complete report of the results, to assess the appropriateness of the used method, and consequently the trustworthiness of the findings (Page et al., 2021).

Four electronic databases [ERIC and Academic Search Complete (through EBSCO database), Scopus, and Web of Science] were used to identify the articles published on the topic of interest on 13 of February 2023. The search included all the terms that the research team identified as relevant to have a wide picture of the association between academic achievement and school engagement (Table 1). After the identification of the relevant articles, the selection of studies was conducted in pairs of researchers that screened the studies independently.

### Inclusion and exclusion criteria

All the studies were assessed and reviewed against the following inclusion criteria: (1) socio-emotional security (particularly attachment to parents and peers and related variables) was considered the independent variable; (2) academic achievement and/or school engagement were considered as the dependent variable; (3) primary research studies using a quantitative methodology; (4) studies with participants from preschool to secondary school (K-12), including second-chance and vocational schools; (5) articles published between January 2018 and December 2022; and (6) written in English. Articles were excluded when the following exclusion criteria were present: (1) the aim of the study was to conduct a literature review or meta-analysis; (2) interventions or focus on instrument validation studies; (3) studies using a qualitative approach; (4) studies developed in an e-learning context; (5) studies with university students; and (6) studies focused on schooling in extreme conditions (e.g., COVID-19, armed conflict, natural disaster, child hospitalization, food insecurity).

### Data extraction

The search of these databases yielded a total of 522 articles which were narrowed down to 392 after the detection and elimination of duplicates. Articles that did not meet our independent and dependent variables were removed during the abstract screening phase, resulting in 88 articles moving to the next phase. During the full-text review, articles were further examined for methodological compliance with our inclusion/exclusion criteria. In total, 50 articles were excluded: (1)

TABLE 1 Systematic literature review search strategy.

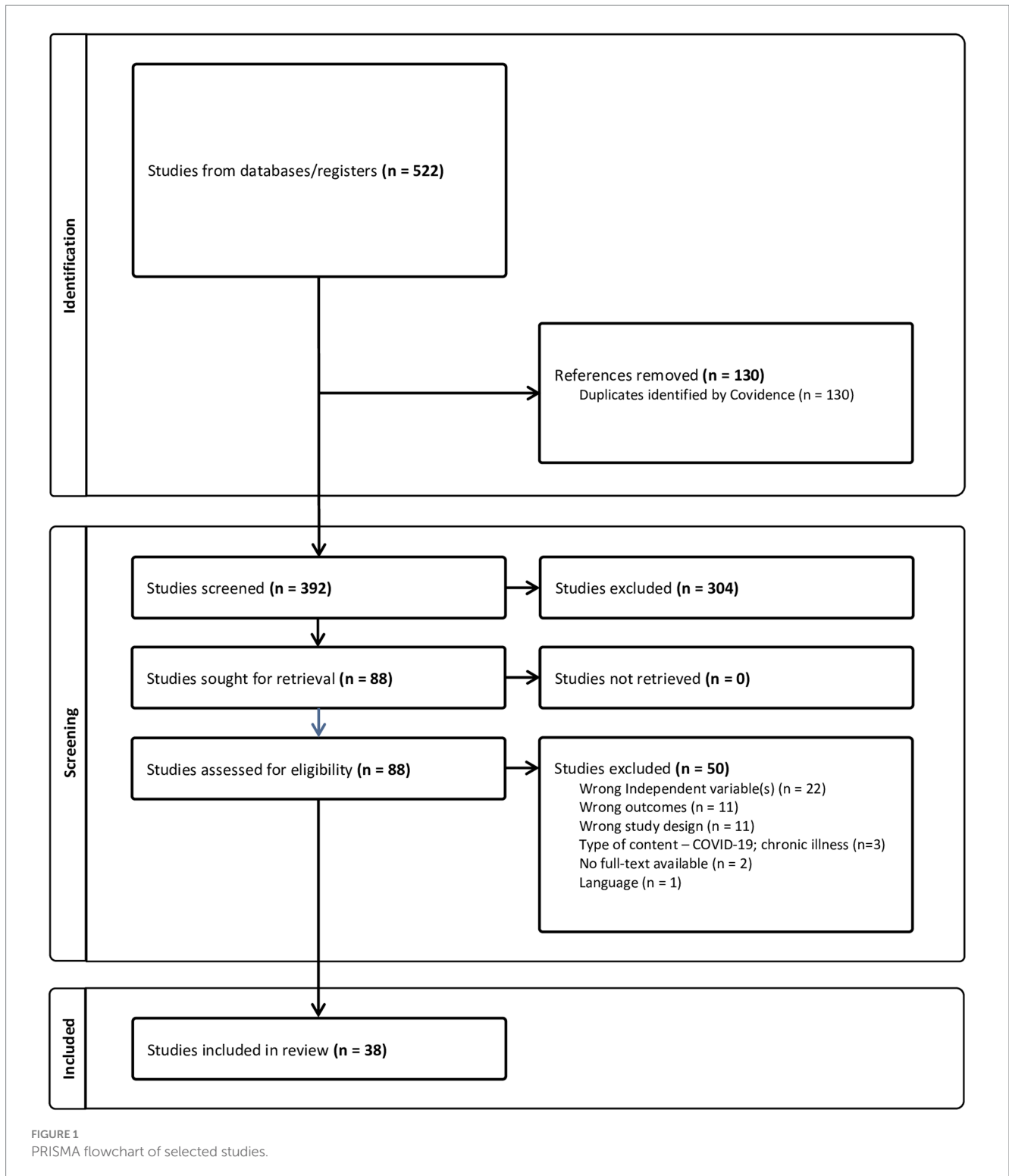
Population axis 1	Independent variable axis 2	Dependent variable axis 3	Setting axis 4
Student	Bond*	Attainment	School
OR child*	OR relation*	OR “academic achievement”	OR preschool*
OR adolescent	OR attachment	OR “school achievement”	OR nursery
OR youth	OR sensitivity	OR “academic underachievement”	OR kindergarten
OR young people	OR responsiveness	OR “school underachievement”	OR “second-chance school”
OR pupil	OR security	OR “academic results”	
	OR insecurity	OR “academic performance”	
	OR interaction	OR “academic grades”	
	OR safe*	OR “academic failure”	
	OR care	OR “school outcomes”	
	OR depend*	OR “academic outcomes”	
	OR warmth	OR “learning outcomes”	
	OR closeness	OR “learning process”	
	OR support	OR evaluation	
	OR trust	OR “school development”	
		OR “academic development”	
		OR well-being	
		OR “school engagement”	
		OR “academic engagement”	
		OR willingness	
		OR motivation	
		OR involvement	
		OR commitment	
		OR dropout	
		OR drop out	
		OR dropout	
		OR “school wastage”	
		OR “school attendance”	
		OR presence	
		OR “school leaving”	
		OR absent*	
		OR absence	
		OR success	

in 22 articles, the independent variable was not related to socio-emotional security; (2) in 11 studies the dependent variables were not school outcomes; (3) in 11 studies the design did not fulfil the inclusion criteria (qualitative studies, intervention evaluation, and measure validation studies); (4) in three studies data was collected during extreme conditions (COVID-19 pandemic and chronic illness); (5) in two studies the full-text version was not available; and (6) in one study the language of writing was not English. A total of 38 articles were extracted in the final stage (Figure 1).

To conduct data extraction the Covidence software was used to streamline the process of screening references, data extraction and keep the track of the work (Veritas Health Innovation, 2021). During the full-text screening, the average reliability was moderate

(Cohen’s  $k=0.58$ ). When an agreement was not met, in each screening stage, a consensus was obtained between the two independent reviewers.

To accomplish with the goal and synthesize data from the studies, the following information was extracted from each article using a template developed for this purpose: generic article information (authors, publication year, DOI), socio-demographics (sample size, age, school level, country), theoretical framework, type of informant for the attachment to parents or peers (e.g., support, relationship quality, parental practices), and for the school-related outcomes (academic achievement, school engagement), type of study design, statistical analyses used, the type of relation between attachment-related variables and the outcome and general comments.



## Results

### Characterization of the studies

Considering the 38 studies included in the systematic literature review, the sample sizes ranged from 60 to 99,686 and the average mean of age was 12.8 years (average  $SD=1.20$ ). Data regarding the

independent variable was based on the informant reports, specifically children ( $n=32$ ), parent ( $n=5$ ), and teacher ( $n=1$ ). The dependent variable was reported by children ( $n=30$ ) or other and third parties (e.g., GPA scores) ( $n=9$ ). Almost all studies relied on students' self-report to assess both independent and dependent variables. The studies included in the review were conducted in seven world regions. See [Table 2](#) for a complete description of the sociodemographic variables.

TABLE 2 Characteristics of the studies.

Type of study	N	%	Average mean	Average SD
Cross-sectional	29	76.3%		
Longitudinal	9	23.7%		
Age*			12.78	1.19
Gender**				
Male		49.78		
Female		50.22		
School level***				
Early childhood education	0	0%		
Primary (1–6 grades)	7	18.4%		
Lower secondary (7–9 grades)	8	21.1%		
Upper secondary (10–12 grades)	8	21.1%		
Primary and lower secondary	3	7.9%		
Primary, lower, and upper secondary	1	2.6%		
Lower and upper secondary	6	15.8%		
Vocational	1	2.6%		
Independent variable informants				
Student	32			
Teacher	1			
Parent	5			
Outcome informants				
Student	30			
Other (e.g., school records)	9			
World's regions				
North America	6	15.8%		
Africa	4	10.5%		
Europe	10	26.3%		
Middle East	2	5.3%		
Southeastern Europe and Western Asia	3	7.9%		
Asia	10	26.3%		
South America	3	7.9%		

\*In 15 articles, the mean age was missing; in 17 articles, the age's SD was missing; \*\*Four articles did not report participants' gender; \*\*\*Four articles did not report school level.

The independent variables were categorized using a content-analytic approach, ensuring the conceptual proximity between them and the integration in related theoretical frameworks (Attachment Theory, Socio-Ecological Theory, Self-Determination Theory, Positive Parenting Theories, and Social Goal Theory). Only five studies used attachment as the independent variable. Most studies focused on support (e.g., peer support, parental support) ( $n=12$ ), followed by relationship quality (e.g., relationship with parents) ( $n=10$ ), involvement (e.g., parental involvement) ( $n=6$ ), parental practices (e.g., parental styles) ( $n=5$ ), and attachment style/security ( $n=5$ ). The measures that were used for assessing the independent variables were validated measures of these variables. In some particular situations, only specific subscales or items were used.

The school related outcomes were classified into the two categories of interest for this systematic review: academic

achievement ( $n=17$ ) and school engagement ( $n=23$ ). Several studies were focused on “other outcomes,” such as academic self-regulation, school wellbeing, self-determination, happiness at school, school frequency/truancy, school-related cognitive functioning, academic competence, and academic stress. These studies were assigned to the main categories, based on their conceptual proximity, more specifically: (1) “perceived academic competence” and “school-related cognitive functioning” were assigned to the category “academic achievement”; and (2) “school wellbeing,” “academic self-regulation,” “academic stress,” “students’ homework effort,” “frequency of truancy,” and “happiness at school” were assigned to the category “school engagement.”

Only direct effects of the independent variables on the outcome variables were considered. The results were organized based on the analysis of the articles attending to the outcome variables.

## School engagement

Twenty-four studies focused on the impact or association of attachment-related variables on or with school engagement and related variables. Most of the studies presented significant results and only in four studies no significant associations or predictions were reported (Demirtas-Zorbaza and Ergeneb, 2019; Göbel and Preusche, 2019; Teuscher and Makarova, 2018; Yang et al., 2022) (Table 3).

*Attachment* three studies focused on the role of parental warmth on school engagement. Chung et al. (2020) and Theron et al. (2022) found that parental warmth predicted school engagement, both in lower and upper secondary students. One study found weak, but significant, correlations between attachment to parents and peers and school engagement, in secondary students (Sevari and Rezaei, 2019).

*Relationship with parents* five studies explored the association or impact of the relationship with parents or caregivers with or on school engagement. Song et al. (2018) showed a positive, but weak, association between parent–child relationship and school engagement. Three studies (Chyu and Chen, 2022; Markkula et al., 2021; Sethi and Scales, 2020) reported a positive impact of the level of parent–child relationship, and developmental relationship with parents—as defined by Pekel et al. (2018) – on school engagement. Of these, one study showed that cognitive school engagement was only predicted by a positive relationship with the father (Martinot et al., 2022). Another study examined the predictive power of developmental parent–child relationship on a specific dimension of academic engagement—academic motivation, with the relationship with parents significantly predicting motivation in middle school and in high-school students (Sethi and Scales, 2020). One study focused on the quality of the relationship with the caseworker as a predictor of emotional, behavioral, and cognitive school engagement of youth in foster care, with results showing a significant predictive power on these three dimensions of engagement (Jaramillo and Kothari, 2022).

*Parental involvement* two studies examined the impact of parental involvement and school engagement, with inconsistent results. In Cheung (2019) study, parental involvement in learning significantly predicted school engagement, but in Demirtas-Zorbaza and Ergeneb (2019) study, no significant associations were found between these variables.

*Parental support* seven studies explored the association or predictive power of parental support on school engagement. Three studies explored the influence of parental autonomy support on school engagement. Parental autonomy support is considered the affective recognition of one's own free choice and self-determination that a child obtains from his/her parents (Zhao et al., 2022). One of these studies showed a weak, but significant correlation between parental autonomy support and school engagement (Zhou et al., 2019), and the other two studies showed that parental autonomy support significantly predicted school engagement (Feng et al., 2019; Zhao et al., 2022). A more general assessment of parental support was analyzed in four studies. In Martinot et al. (2022) study, parental support predicted cognitive school engagement, and in Ryan et al. (2019) and in Toraman et al. (2022) parental support predicted global school engagement. Göbel and Preusche (2019) showed that parental support was not associated with school engagement.

*Parental practices* one study examined the relation between parental practices and autonomous motivation at school (Cimon-Paquet et al., 2022) showing bidirectional associations between

parental practices, namely perceived parental solicitation (e.g., parents' asking their adolescent about their activities outside of the home), and autonomous motivation (e.g., when students engage in their schoolwork because they find them inherently interesting) assessed 12 months later.

*Relationship with peers* four studies addressed the role of the relationship with peers on school engagement. Demirtas-Zorbaza and Ergeneb (2019) found that peer relationships significantly predicted school engagement. In another study, the level of peer acceptance during the 4th grade predicted school engagement in the same school year, but also in the 5th and 6th grades (Weyns et al., 2021). Sethi and Scales (2020) reported that developmental relationships with peers predicted academic motivation in middle school, but not in high school. On the contrary, Teuscher and Makarova (2018) did not find positive associations between the relationship with peers and school engagement.

*Peer support* five studies addressed the relation between peer support and school engagement. Three studies showed that peer support predicted school engagement (Göbel and Preusche, 2019; Ryan et al., 2019; Saleh et al., 2019). One study reported that peer support predicted social engagement, but also behavioral disengagement (Martinot et al., 2022). One study reported no significant associations between peer support and school engagement (Yang et al., 2022).

*Social support* one study explored the role of general social support on school engagement. O'Neal et al. (2022) aimed to better understand the influence of social support, namely the dimensions of reliable alliance, sense of attachment, guidance, social integrations, reassurance of worth, and opportunity for nurturance, from family and non-family relationships, on school engagement, showing a positive, but weak correlation between these variables.

## Academic achievement

Seventeen studies focused on the impact or association of attachment-related variables on or with academic achievement. Most of the studies evidenced significant results and only three presented no significant associations or predictions (Carmona-Halty et al., 2022; de Castro and Pereira, 2019; Li et al., 2022) (Table 4).

*Attachment* three studies examined the role of attachment on academic achievement. Zarrella et al. (2018) showed that, attending to attachment patterns, securely attached children reported better academic scores when compared to insecure-avoidant or disorganized attachment children. The third study showed that communication with mother and trust to father significantly predicted academic achievement (Demirtas-Zorbaza et al., 2018). In de Castro and Pereira's (2019) study, no association was found between attachment styles and academic achievement.

*Parent–child relationship* three studies focused on the role of parent–child relationship in academic achievement. In Evans and Field's (2020) study, the general quality of parent–child relationships significantly predicted academic achievement, as well as in Toor's (2018) study that compared high-achievers and low-achievers. On the one hand, results showed that high achievers reported more protective relationships, symbolic reward, and love from their mothers. On the other hand, low achievers reported more rejection and neglect from their mothers (Toor, 2018). Carmona-Halty et al. (2022), reporting data from a longitudinal design, did not find a significant association

TABLE 3 Association with/impact on school engagement.

References	Independent variable	Independent variable dimension	Association with/impact on School engagement
Cheung (2019)	Parental involvement in learning	Involvement	Parents' involvement at Wave 1 was associated with adolescents' school engagement at Wave 3, $\gamma_s = 0.15$
Chung et al. (2020)	Parental warmth	Attachment	High mother/Low father warmth; $\beta = 2.25, p < 0.001$
Chyu and Chen (2022)	Parent-Child Relationship	Relationship	Parent-child relationship predicts Academic Stress; $\beta = 0.09; p < 0.01$
Cimon-Paquet et al. (2022)	Perceived parental monitoring	Parental Practices	Parental solicitation at T1 predicted autonomous motivation at T2 ( $\beta = 0.21, p < 0.01$ )
Demirtas-Zorbaza and Ergeneb (2019)	Parent Involvement	Involvement	n.s.
Demirtas-Zorbaza and Ergeneb (2019)	Peer Relationships	Relationship	Negative peer relationships (asocial + excluded) predicted school adjustment; $\beta = 0.48$
Feng et al. (2019)	Parental Autonomy Support	Support	Parental autonomy support predicted mathematics homework effort; $\beta = 0.35; p < 0.01$
Göbel and Preusche (2019)	Parental support	Support	n.s.
Göbel and Preusche (2019)	Peer support	Support	Peer support predicted emotional school engagement; $\beta = 0.123, p < 0.05$
Jaramillo and Kothari (2022)	Caseworker relationship quality	Relationship	Caseworker relationship quality predicted Emotional engagement, Behavioral engagement, and Cognitive engagement; $\beta = 0.08, p < 0.001$ ; $\beta = 0.06, p < 0.001$ ; $\beta = 0.13, p < 0.01$ , respectively
Markkula et al. (2021)	Child-parent relationship	Relationship	Parent-child communication predicted school engagement in girls (OR = 2.41, $p > 0.001$ ) and boys (OR = 2.1, $p < 0.001$ )
Martinot et al. (2022)	Parental and peer support	Support	Cognitive engagement predicted by father support ( $\beta = 0.19, p < 0.001$ ); behavioral disengagement predicted by peer support ( $\beta = 0.12, p < 0.01$ ); social engagement predicted by peer support ( $\beta = 0.28, p < 0.001$ )
O'Neal et al. (2022)	Social support	Support	Social support from all the relationships in students' lives (family and non-family) was associated with school engagement; $r = 0.27, p < 0.001$
Ryan et al. (2019)	Parental support	Support	Perceived parental support predicted school engagement; $\beta = 0.13, p < 0.001$
Ryan et al. (2019)	Peer support	Support	Perceived friends' support predicted school engagement $\beta = 0.05, p < 0.01$
Saleh et al. (2019)	Peer support	Support	Peer support predicted adolescents' school satisfaction; $\beta = 0.12, p < 0.001$
Sethi and Scales (2020)	Developmental relationships with parents and friends	Relationship	Developmental relationship with parents and peers predicted academic motivation in middle school ( $\beta = 0.17, p < 0.01$ ; $\beta = 0.12, p < 0.001$ , respectively). Developmental relationship with parents predicted academic motivation in high-school ( $\beta = 0.13, p < 0.05$ )
Sevari and Rezaei (2019)	Parent and peer attachment	Attachment	Attachment to parents and attachment to peers was associated with school engagement; $r = 0.24, p < 0.001$ ; $r = 0.23, p < 0.001$ , respectively
Song et al. (2018)	Parent-child relationship	Relationship	Parent-child relationship was associated with school engagement; $r = 0.17, p < 0.05$
Teuscher and Makarova (2018)	Relationship with peers	Relationship	n.s.
Theron et al. (2022)	Parental/caregiver warmth	Attachment	Very high levels of parent/caregiver warmth predicted students' membership in the high school engagement cluster; $\beta = -0.72, p < 0.01$
Toraman et al. (2022)	Parental support	Support	Parental support for academic success predicted happiness at school; $\beta = 0.04, p < 0.05$
Yang et al. (2022)	Peer support	Support	n.s.
Weyns et al. (2021)	Peers acceptance 4th grade	Relationship	Peers acceptance at 4th grade predicted school engagement at 4th grade, 5th grade, and 6th grade; $\beta = 0.57, p < 0.01$ ; $\beta = 0.29, p < 0.01$ ; $\beta = 0.23, p < 0.01$ , respectively
Zhao et al. (2022)	Perceived parental autonomy	Support	Perceived parental autonomy supported predicted autonomous motivation; $\beta = 0.34, p < 0.001$
Zhou et al. (2019)	Parental autonomy support	Support	Parental autonomy support was associated with school engagement; $r = 0.35; p < 0.01$

TABLE 4 Associations with/impact on academic achievement.

References	Independent variable	Independent variable dimension	Association with/impact on Academic achievement
Assefa and Sintayehu (2019)	Parental involvement	Involvement	Parental involvement was associated with academic achievement; $r = 0.64, p < 0.01$
Boateng et al. (2021)	Parenting styles	Parental practices	Authoritative, authoritarian, and neglecting styles predicted academic achievement; $\beta = 0.10, p < 0.001$ ; $\beta = 0.04, p < 0.001$ ; $\beta = -0.07, p < 0.001$ , respectively. Permissive parenting: n.s.
Brajša-Žganec et al. (2019)	Parental supervision	Parental practices	Parental supervision was negatively associated with students' school achievement; $r = -0.11, p < 0.01$
Carmona-Halty et al. (2022)	Parent-child relationship	Relationship	n.s.
Chung et al. (2020)	Parental home-based involvement	Involvement	Parent home-based involvement predicted students' Grade Point Average; $\beta = 0.03, p < 0.01$
Dagnew (2018)	Parenting styles	Parental practices	Authoritative, authoritarian, and permissive styles predicted academic achievement; $\beta = 0.331, p < 0.001, \beta = -0.394, p < 0.001, \beta = -0.242, p < 0.001$ , respectively Neglectful style: n.s.
Demirtas-Zorbaza et al. (2018)	Attachment to parents	Attachment	Communication with mother and trust to father predicted academic achievement; $\beta = 0.12, p < 0.05, \beta = 0.08, p < 0.05$ , respectively
de Castro and Pereira (2019)	Attachment style	Attachment	n.s.
Evans and Field (2020)	Quality of parent-child relationships	Relationships	Parent-child relationships (harmony) predicted Maths attainment; $\beta = 0.042, p < 0.000$
Lara and Saracostti (2019)	Parental involvement	Involvement	High and average involved parents had children with higher academic achievement than low involved parents: $F(2,430) = 5.37, p = 0.003$
Li et al. (2022)	Parental academic support	Support	n.s.
Liu et al. (2022)	Parents emotional support	Support	Parents' emotional support was positively associated with academic performance; $r = 0.10, p < 0.001$
O'Neal et al. (2022)	Social support	Support	Social support from all the relationships in students' lives (family and non-family) was positively associated with academic performance; $r = 0.25, p < 0.001$
Peng et al. (2022)	Parent support	Support	Parental support predicted academic achievement; $\beta = 0.26, p < 0.001$
Saracostti et al. (2019)	Parental involvement	Involvement	Parental involvement predicted the learning outcomes $\beta = 0.132, p = 0.032$ .
Toor (2018)	Mother-child relationship	Relationship	High achievers reported more protective ( $t = 3.43, p < 0.01$ ); symbolic reward ( $t = 5.34, p < 0.01$ ); and love ( $t = 3.52, p < 0.01$ ) from mothers. Low achievers reported more rejecting ( $t = 4.39, p < 0.01$ ); and neglecting ( $t = 5.17, p < 0.01$ ) from mothers.
Zarella et al. (2018)	Attachment style	Attachment	"Secure" children reported better academic scores compared to children with an "insecure-avoidant" style of attachment and disorganized; $F(3, 155) = 2.20, p < 0.001$ .

between parent–child relationship, assessed at the end of the regular academic semester, and academic achievement assessed 18 weeks later.

*Parental involvement* four studies examined the role of parental involvement on academic achievement, and all found positive significant results. [Assefa and Sintayehu \(2019\)](#) reported a moderate positive correlation between parental involvement and academic achievement in secondary school students. In a study conducted with a large sample of secondary school students, parental home-based involvement predicted academic achievement ([Chung et al., 2020](#)). [Lara and Saracostti \(2019\)](#), in a study with elementary school students reported that children with high and average-involved parents presented higher academic achievement than children with parents showing low involvement. Finally, in another study with elementary school students ([Saracostti et al., 2019](#)), parental involvement significantly predicted the learning outcomes of children.

*Parental support* three studies, all conducted in China, analyzed the importance of parental support for academic achievement. [Liu et al. \(2022\)](#), in a study with 1,940 vocational school students, showed that parent's emotional support was positively correlated with students' academic achievement. In another study, also with vocational school students, results showed that global parental involvement significantly predicted students' academic achievement ([Peng et al., 2022](#)). However, [Li et al. \(2022\)](#) study, specifically assessing parental academic support, did not find an association between parental support and children's academic performance.

*Parental practices* two studies focused on parenting styles and academic achievement. Both studies found a significant predictive power of authoritative parenting style on academic achievement. However, the impact of the authoritarian parenting style was different in these studies. In [Boateng et al. \(2021\)](#) study, this style positively predicted academic achievement; in [Dagneu \(2018\)](#), the authoritarian style negatively predicted this outcome. The results related to the permissive and neglecting styles were also not consistent: the neglecting style revealed a significant negative predictive power in [Boateng et al. \(2021\)](#) but was not significant in [Dagneu \(2018\)](#) study. Considering the permissive style, a significant negative predictive power was found in [Dagneu \(2018\)](#) study and was not significant in [Boateng et al. \(2021\)](#). One study, examining the association between poor parental supervision and academic achievement, revealed a weak negative correlation between these variables ([Brajša-Žganec et al., 2019](#)).

*Social support* one study examined the role of social support (family and non-family individuals) on academic achievement ([O'Neal et al., 2022](#)). This study, conducted with a large sample of adolescents from military families, revealed that the experience of social support from family and non-family members was positively correlated with a better academic achievement.

## Early school dropout

No articles were found examining the role of attachment-related variables on early school dropout considering the temporal frame for this systematic literature review – 2018–2022.

## Discussion

This systematic literature review intended to summarize the evidence of the last 5 years (2018–2022) regarding the relationship

between socio-emotional security, particularly attachment to parents and peers or other attachment-related variables, and academic outcomes—school engagement, academic achievement, and early school dropout—in children and adolescents, from preschool to vocational schools.

Considering the screening based on inclusion and exclusion criteria, 38 studies were included in the review. These articles focused on school engagement and academic achievement, as outcomes, with samples of students from elementary school, secondary school, and vocational school levels. No studies were found with preschool children, or with early school dropout as outcome. The absence of studies with preschool children could be explained by the fact that the outcome variables selected for this review are not applicable at this school period. In fact, school engagement requires cognitive skills necessary to have agency toward the school context and, during this developmental stage, children are not yet prepared to do it. Furthermore, academic achievement is only relevant from primary school onwards since formal evaluation procedures usually only start at the primary school. Regarding early school dropout, it was expected that this outcome would be examined in the literature. However, no articles focused on this outcome were included in the review, which could be explained for two main reasons. First, the inclusion criteria followed in the search strategy resulted in the exclusion of eventual qualitative or mixed-methods studies, that are commonly used to address early school dropout (e.g., [Krane et al., 2016](#)). Second, there is a large variability in school systems and policies (e.g., the definition of years of compulsory education), resulting in low levels of dropout, even if based on administrative measures, in many countries. The review was organized based on the analysis of the articles attending to the outcome variables (school engagement and academic achievement) and the attachment-related dimensions used as independent variables (attachment, relationship, involvement, support, and parental practices). In general, the studies showed significant associations or predictive power of the independent variables and the outcomes, with a very limited number of studies showing non-significant results ( $n = 7$ ; 18.4%).

Considering the studies focused on school engagement as the outcome variable, the most prevalent independent variable was parental and peer support. Support from parents or peers was assessed in various ways, corresponding to signs of global attachment, i.e., secure relationships with the student (e.g., [Martinot et al., 2022](#)), secure-base, i.e., supporting student's exploratory behavior, such as their autonomy (e.g., [Feng et al., 2019](#)), or safe haven, i.e., providing support when students face distress or are in need (e.g., [Ryan et al., 2019](#)). In general, these studies show that parental or peer support play a relevant and positive role in students' school engagement. In one of the studies ([Martinot et al., 2022](#)), peer support was associated with social engagement, but also, and unexpectedly, with behavioral disengagement, probably because of the popularity of “troublemaker” students ([Martinot et al., 2022](#)). For adolescents, engaging in disruptive behaviors may increase their popularity, prestige and social recognition and this could be a priority comparing with complying with school demands. The second larger group of studies focused on the students' relationship with parents and peers, mostly addressed as a sign of global attachment quality. In general, the quality of the relationship was related to a better school engagement. These results are in line with previous research showing that school engagement, either addressed as a general construct, or considering its cognitive, behavioral, and emotional/affective dimensions, is

partially predicted by relational variables, either within the actual school context, such as a positive student-teacher relationship (e.g., Allen et al., 2016) or peer friendship quality (e.g., Perdue et al., 2009), but also within the family system, such as parental involvement (e.g., Shumow et al., 2011).

Regarding the studies addressing academic achievement as the outcome, the independent variables examined were related to global attachment quality—addressed by 11 studies (Boateng et al., 2021; de Castro and Pereira, 2019; Carmona-Halty et al., 2022; Dagnew, 2018; Demirtas-Zorbaza et al., 2018; Evans and Field, 2020; O’Neal et al., 2022; Peng et al., 2022; Saracosti, et al., 2019; Toor, 2018; Zarrella et al., 2018), and/or to attachment secure-base—addressed by six studies (Assefa and Sintayehu, 2019; Brajša-Žganec et al., 2019; Chung et al., 2020; Lara and Saracosti, 2019; Li et al., 2022; Liu et al., 2022). In general, all studies reported a significant association between these attachment-related dimensions and students’ academic achievement, in line with previous research showing that attachment has a relevant impact on academic achievement, in different school levels (c.f., Bergin and Bergin, 2009). In particular, there are significant and positive associations between attachment and academic achievement in primary school level but no significant results with students attending 8th grade. Considering the developmental characteristics of the samples, children in the 8th grade tend to be developing close relationships with friends and are more concerned about their opinions and acceptance.

Some limitations of this literature review should be considered and addressed in future studies. First, the methodological quality, taking into consideration the possible biases or weaknesses of the studies was not thoroughly examined. Second, the mediating or moderating role of other variables, in the relation between socio-emotional security with parents and peers, and school-related outcomes, was not explored. It is possible that some non-significant direct effects reported in this review could turn to be significant, when addressed together with other variables. In addition, the predictive power of some independent variables may be stronger through the combined analysis of several variables. Future reviews should also consider the analysis of qualitative and mixed-method studies, allowing to explore socio-emotional factors that have influence on K-12 completion.

Despite the above-mentioned limitations, this systematic review highlighted the relevance of parental and peer relationships for school-related outcomes. Research on academic outcomes is usually focused on the role of individual or school context variables (e.g., students’ academic self-efficacy, teachers’ pedagogical practices). On the other hand, research on attachment to parents tends to examine its impact on children’s broad developmental outcomes (e.g., socio-emotional development). In fact, in this review, only five studies were identified that directly assessed the impact or the relation between attachment styles or attachment security on school engagement and academic achievement (de Castro and Pereira, 2019; Chung et al., 2020; Demirtas-Zorbaza et al., 2018; Sevari and Rezaei, 2019; Zarrella et al., 2018). The inclusion of articles focused on other variables that are not specifically labeled as “attachment”—parental involvement, parental and peer support, parental practices, and relationship with parents and peers—stresses the importance of relational variables on students’ engagement and academic achievement.

## Implications for practice

This literature review confirms the importance of developing secure and warm relationships with people who are significant in children’s lives, given that it may influence their outcomes on several life areas, and contexts, such as school, reinforcing the importance of promoting family-school relationships (Epstein, 1995). Professionals that work with families should recognize that emotional security and support from parents is crucial also for academic dimensions and for children’s development as students. So, schools should be more committed in supporting families in this process. This may be achieved by planning or reinforcing existing family support services in order to enhance the family-school relationship. This relationship can be improved by optimizing communication processes between schools and families or by implementing mutual collaboration practices concerning the learning and developmental outcomes and goals (e.g., Epstein, 1995). In order to do so, teachers and other school professionals should also be trained and supervised in this domain.

This systematic literature review also emphasizes the importance of peer relationships in students’ academic outcomes. In this sense, the promotion of social skills, such as, cooperation or assertiveness should be a priority. This can be achieved by implementing universal programs in schools to promote socioemotional skills, focusing on the relationship’s skills domain (e.g., CASEL, 2020). Enabling strong and healthy social relationships between peers, schools are also promoting academic outcomes.

## Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

## Author contributions

PD: Conceptualization, Formal analysis, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing. LV: Conceptualization, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing. AC: Conceptualization, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing. RD: Formal analysis, Investigation, Methodology, Writing – review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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