

## Studies on student engagement in adolescence: A scoping review

Nuno Archer de Carvalho <sup>1</sup> & Feliciano Henriques Veiga <sup>1</sup>

<sup>1</sup> UIDEF - Unidade de Investigação e Desenvolvimento em Educação e Formação, Universidade de Lisboa, Instituto de Educação, Lisboa PORTUGAL

**Abstract:** Research over recent decades has confirmed the critical role of *student engagement* in adolescent learning, achievement, and development. However, studies quantity and diffusion make further up-to-date systematization necessary. This study aims to contribute to this effort by focusing on multidimensional *student engagement* research, published in the last decade, focusing on adolescence. Following a previous protocol, a scoping review was conducted using eight scientific literature databases. From an initial set of 849 studies, 135 were selected. Results showed the increase of research in quantity and geographical breadth, the strive for consistency, the relevance of the threefold approach (behavioral, emotional, and cognitive), the value of *student engagement* for adolescents' health and school adjustment, and the key role played by teacher-student relations, school environment, and individual strengths. In addition, suggestions highlighted methodological improvements, the study of new variables, and, regarding promotion, the balance between wide school approaches and attention to students' specific needs.

**Keywords:** *Student engagement; Systematic literature review; School adjustment; Adolescent development.*

A time of rapid changes, growth, and learning, adolescence is pivotal for present and future well-being (Patton et al., 2016), including thriving, living a fulfilled life, actively and responsibly participating in the community, and shaping our common and global future (Alfvén et al., 2019). In adolescent development, education plays a key role, and school appears as a privileged developmental context (Eccles & Roeser, 2011; Patton et al., 2016). Moreover, adolescent development encompasses academic changes (Li, 2011; Upadaya & Salmela-Aro, 2013), including for many students, the transition from more nurturing and protected school settings to others less supportive or less aligned with adolescents' developmental needs (Wang & Hofkens, 2020).

In the study of student-school relations, authors point out that many adolescents are at school but not engaged, and risk missing meaningful opportunities for their present and future lives (Appleton et al., 2008; Fredricks et al., 2004; Li, 2011; Reschly & Christenson, 2012). Similarly, although school attendance can be legislated, *student engagement* in school cannot (Appleton et al., 2008). In the last 30 years, empirical evidence highlighted *student engagement* as a critical factor for learning, academic achievement, and school dropout (Lei et al., 2018; Wang & Degol, 2014), but also delinquency, substance use, anti-social behaviors, well-being, mental health, and positive development (Archambault et al., 2019; Li, 2011; Veiga, Burden, et al., 2014). Findings also emphasized the concept's malleability or responsiveness to the environment and feasible intervention (Archambault et al., 2019; Fredricks et al., 2004; Lawson & Lawson, 2013; Li, 2011; Quin, 2017; Wang & Degol, 2014). Acknowledging these findings, *student engagement* was integrated into APA's thesaurus as the "degree to which students are interested and involved in learning, school or classroom activities, and/or school-related extracurricular activities" (APA, 2021).

The *student engagement* concept includes energy in action (Appleton et al., 2008; Veiga, Burden, et al., 2014) and commitment toward learning and school (Fredricks et al., 2004). It can be defined as a "centripetal experience of bonding to school" (Veiga, 2016, p. 188), visible in the "effort, interest, enjoyment, and absorption in initiating and sustaining learning activities" (Lam et al., 2014, p. 215). One important issue about *student engagement* is its conceptual and methodological haziness (Appleton et al., 2008; Lam et al., 2014; Quin, 2017; Reschly & Christenson, 2012). For this reason, clarifications are in order. The first clarification, consistent with the APA thesaurus (APA, 2021), is the terminological option for *student engagement*. Compared to related concepts like *school engagement*, this option shares the same focus on school as a privileged developmental setting but opens engagement beyond school walls (Appleton et al., 2008). Some authors, stressing the need to define *student engagement's* object, opted for *student engagement in school* (Lam et al., 2014; Veiga, 2016). The second clarification is the option for a

<sup>1</sup> Correspondence address: Instituto de Educação da Universidade de Lisboa, Lisboa, Portugal, Alameda da Universidade, 1649-013 Lisboa, Portugal. E-mail: [narcher@campus.ul.pt](mailto:narcher@campus.ul.pt)

psychological and multidimensional understanding of engagement. This option enriches the earlier focus on disengagement or engagement exclusively based on observational behaviors concerning attendance or specific tasks (Appleton et al., 2008). After the work of Jeremy Finn in 1989, researchers began to value the combination of more overt dimensions with more psychological ones (Quin, 2017). In a seminal review of the literature, Fredricks et al. (2004) presented *student engagement* as a *metaconstruct*, meaning a concept that integrates important but different constructs or dimensions which enrich its understanding, assessment, and study. Despite the controversy regarding the number and definition of the dimensions (Li, 2011; Reschly & Christenson, 2012), the triadic model of *student engagement*, including a behavioral, emotional, and cognitive dimension, stood out (Appleton et al., 2008; Archambault et al., 2019; Fredricks et al., 2004; Lam et al., 2014; Lawson & Lawson, 2013; Li, 2011). Other complementary dimensions have been suggested in *student engagement* research, such as the academic dimension (Appleton et al., 2006; Reschly & Christenson, 2012) or the agentic dimension (Reeve & Tseng, 2011; Veiga, 2016; Wang & Degol, 2014).

### Systematization of existing research

The present study was preceded by an exploratory survey of literature reviews to understand the status of literature systematization published in the last decade. This search was done using Google, Scopus, and Web of Science (December 2020), and a search strategy grounded on both *student engagement* and *school engagement* to select peer-reviewed literature reviews focused on adolescence, including lower and upper secondary school students (UNESCO, 2012). From this exploratory search, whose findings are presented in the protocol (Appendix 1 - presented as supplementary material in the online version of the article), three ideas had an important role in designing a new and more comprehensive systematization.

The first idea was a doubt regarding the extent of *student engagement* research on adolescence. This doubt was heightened by the difference between the number of literature reviews found after duplicates removal ( $n = 395$ ) and the set of reviews selected focusing on adolescence ( $n = 20$ ). Secondly, although the literature emphasizes *student engagement's* conceptual haziness, evidence of some consistency was found concerning conceptual understanding. Regarding terminology, most literature reviews opted for *student engagement* ( $n = 12$ ), which in some reviews was complemented with *academic* or *in school* ( $n = 3$ ). On the other hand, few reviews used *school engagement* ( $n = 3$ ), and fewer opted for other concepts ( $n = 2$ ). Similarly, most of the literature reviews agreed on the concept's multidimensionality, in many cases using Fredricks et al.'s (2004) threefold dimensions as the primary reference ( $n = 12$ ). Thirdly, looking at the main topics, reviews focused on school dimension topics ( $n = 12$ ), including teacher-student relations ( $n = 6$ ), teachers' role ( $n = 3$ ), student achievement ( $n = 2$ ), and disengagement of gifted students ( $n = 1$ ). Other isolated topics included ethnic and racial identity, family and parental variables, sports or physical activity, and general engagement presentation. Although these results underline school adjustment, a comprehensive systematization of the relationship between *student engagement* and broader students' well-being seemed missing. Overall, the findings of this exploratory search, highlighting existing gaps and questions, justify a more comprehensive literature review. The importance and actuality of a rigorous overview of *student engagement* research are visible in a recent, high-quality literature systematization (Salmela-Aro et al., 2021), which only included longitudinal studies, leading its authors to stress the need for other literature reviews using different designs. In sum, shortcomings persist regarding *student engagement* research focusing on adolescence, with questions regarding the extent, conceptual and methodological options, main topics and variables, and future study and intervention directions.

### Current study

The authors conducted a scoping review to review piecemeal studies on *student engagement* in adolescence. The purpose that distinguishes a scoping review from other methodologies is the breadth of coverage versus, for instance, a systematic review's exhaustiveness. However, the same methodological rigor is expected, appealing to cutting-edge and rigorous methodological references to assure an up-to-date and representative overview of extant research. As in any scientific study, the process is ignited by a clear research problem that guides the systematic literature search, selection, and analysis (Arksey & O'Malley, 2005).

Our research problem is: What are the main characteristics of the studies produced over the last decade on multidimensional student engagement focusing on adolescence? Five overarching study questions (SQ) were derived from the problem to guide the study: (SQ1) What is the extent of the research? (SQ2) What conceptual approaches are used? (SQ3) What designs and measures are used? (SQ4) What are the main topics and variables studied? (SQ5) What implications for research and intervention are suggested?

## METHOD

The study was guided by a previous protocol (Appendix 1), following Arksey and O'Malley's (2005) five-stage framework, PRISMA-ScR standards checklist (Tricco et al., 2018), and earlier studies (e.g., Carvalho & Veiga, 2022).

### Identifying relevant studies

The identification of relevant studies used eight bibliographic databases: (a) Academic search complete; (b) Education source; (c) Eric; (d) PsycARTICLES; (e) PsycINFO, (f) Scielo, (g) Scopus, and (h) Web of Science. The search was conducted between January and February, and the last search was on 23<sup>rd</sup> February, 2021. Consistently with APA's thesaurus (2021) and the previous exploratory search of existing literature reviews (December 2020), the search strategy focused on *student engagement*. An example of the final search string used in the Web of Science database is *student engagement AND (adolescence\* OR early adolescence\* OR youth) NOT (higher education OR university OR college OR undergraduate OR blended OR flipped OR STEM OR MOOC)*. In addition, the search was refined by: (i) language - English OR Spanish OR Portuguese; (ii) document types - Articles OR Review Articles; (iii) research areas - Psychology OR Education Educational Research; (iv) time span - 2010/2021 although only the studies published between 2011 and 2020 were included. The explanation for this time period lies in the mid-2020 experience of COVID-19 and worldwide lockdown, with dramatic changes for schools, educators, and students. Consequently, a thorough literature review on *student engagement* from 2021 forward is needed to address and discuss these new changes and challenges.

### Study selection

The process of study selection used four eligibility criteria: (a) peer-reviewed papers published between 2011-2020 in English, Spanish, or Portuguese; (b) a focus on quantitative, qualitative, or literature research versus theoretical papers; (c) the use of a psychological and multidimensional approach of *student engagement* versus unidimensional or specific approaches (in only one area, school discipline or activity); (d) the inclusion of adolescent students between 10 and 19 years (Patton et al., 2016); that is, in lower or upper secondary school (UNESCO, 2012). The selection process included duplicates removal, the screening phase (titles, keywords, and abstracts' analysis), and the eligibility phase demanding a deeper analysis of each study (Arksey & O'Malley, 2005). It was conducted using Microsoft Excel.

### Charting the data

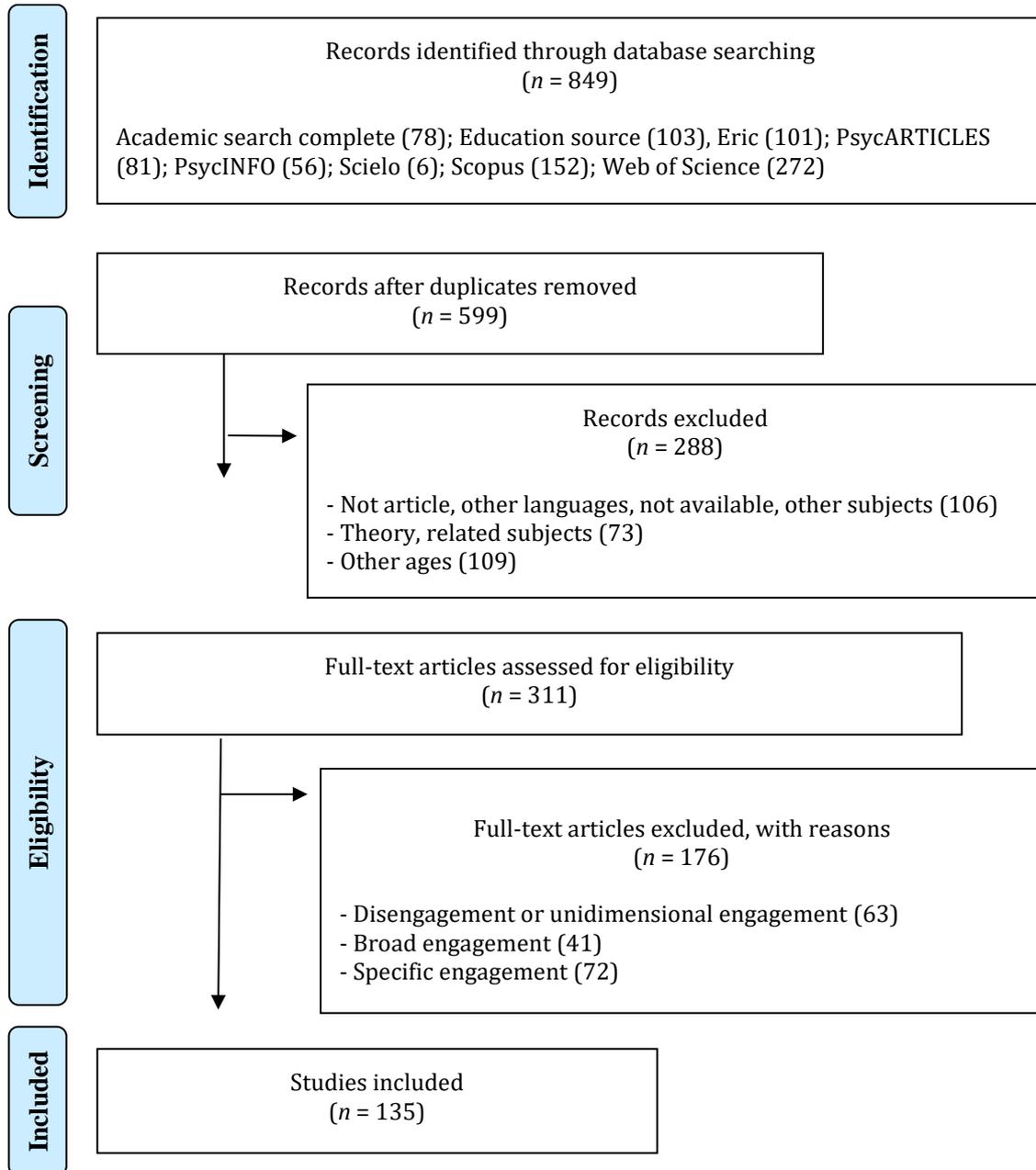
Data extraction drew on a specific characterization form (Appendix 2), presented as supplementary material in the online version of the article. The form was filled in on Microsoft Excel. For data charting, the authors defined the categories. For the first three study questions, categories were previously identified and fine-tuned along with the review. For the last two study questions, clusters and categories were identified along with the review process, using references from the APA's Thesaurus or APA's Psychology Dictionary (Appendix 1).

### Collating, summarizing, and reporting results

The selected number of studies imposed two decisions following other literature reviews (Appendix 1). The first was to give each study a reference number (Ref.) used for in-text references. The second was to present information from individual studies, including their references, as supplementary material (Appendix 3) in the online version of the article, thus reducing the article's length and improving readability.

## RESULTS

The initial search presented 849 studies, of which 135 were selected. The selection process is presented in Figure 1, using PRISMA's flow diagram. Next, introducing results, Table 1 presents an index of the studies selected and alphabetically ordered by authors, and with each study's reference number (Ref.); while Table 2 offers an overview of the main results using frequency (*N*) and percentage (%). Results are then presented for each study question, using statistical synthesis and a narrative summary pointing out the most important findings. The references to the selected studies are presented throughout the text using their reference number in parentheses.



**Figure 1.** PRISMA flowchart of study selection process.

**Table 1.** Studies included and their reference in alphabetical order.

Ref.	Authors & date	Ref.	Authors & date
1	Anderson et al., 2017	69	Moreira & Dias, 2019
2	Ansong et al., 2017	70	Moreira, Faria, et al., 2020
3	Awang-Hashim et al., 2015	71	Moreira, Inman, et al., 2020
4	Bakadorova et al., 2020	72	Moreira et al., 2014
5	Blondal & Adalbjarnardottir, 2014	73	Moses & Villodas, 2017
6	Borofsky et al., 2013	74	Mustafaa et al., 2017
7	Brière et al., 2014	75	Nayir, 2017
8	Bryce et al., 2020	76	Olivier et al., 2020
9	Cadime et al., 2016	77	Orkibi & Tuaf, 2017
10	Chen et al., 2019	78	Pan & Zaff, 2019
11	Chong et al., 2018	79	Pan et al., 2017
12	Coelho & Dell'Aglio, 2018	80	Parker & Wilkins, 2018
13	Constante et al., 2019	81	Peterson et al., 2020
14	Cooper, 2014	82	Phan et al., 2016
15	Crowley & Cornell, 2020	83	Pöysä et al., 2020
16	Cunha et al., 2020	84	Pöysä et al., 2019
17	Curran & Standage, 2017	85	Prata et al., 2019
18	Damian et al., 2017	86	Qahri-Saremi & Turel, 2016
19	Datu et al., 2018	87	Quin, 2017
20	Debnam et al., 2014	88	Quin et al., 2018
21	Dierendonck et al., 2020	89	Raftery-Helmer & Grolnick, 2018
22	Dotterer & Lowe, 2011	90	Ramos-Díaz, Rodríguez-Fernández, & Revuelta, 2016
23	Dunbar et al., 2017	91	Ramos-Díaz, Rodríguez-Fernández, Revuelta, et al., 2016
24	Engels et al., 2017	92	Rangvid, 2018
25	Engels et al., 2019	93	Raufelder et al., 2016
26	Farouk & Edwards, 2020	94	Raufelder et al., 2015
27	Fatou & Kubiszewski, 2018	95	Reschly et al., 2014
28	Fernández-Lasarte et al., 2019	96	Rodríguez-Fernández et al., 2018
29	Fonsêca et al., 2016	97	Rodríguez-Fernández et al., 2016
30	Fonsêca et al., 2020	98	Rueda et al., 2020
31	Geng et al., 2020	99	Saeki & Quirk, 2015
32	Gutiérrez et al., 2018	100	Schroeter et al., 2015
33	Hakimzadeh et al., 2016	101	Shoshani, Nakash, et al., 2016
34	Harley et al., 2018	102	Shoshani, Steinmetz, et al., 2016
35	Harris et al., 2020	103	Smart et al., 2019
36	Hazel et al., 2014	104	Stefansson et al., 2018
37	Heffner & Antaramian, 2016	105	Stefansson et al., 2016
38	Henstock et al., 2013	106	Storlie & Toomey, 2020
39	Hill & Wang, 2015	107	Suldo et al., 2018
40	Hirschfield & Gasper, 2011	108	Tas, 2016
41	Inman et al., 2020	109	Tomás et al., 2016
42	Irvin, 2012	110	Tomaszek, 2020
43	Jelas et al., 2016	111	Tomaszewski et al., 2020
44	G. Jones & Lafreniere, 2014	112	Totura et al., 2014
45	J. N. Jones, 2011	113	Van Ryzin, 2011
46	J. M. Jones & Lee, 2020	114	Veiga et al., 2015
47	Konold & Cornell, 2015	115	Venta et al., 2019
48	Konold et al., 2017	116	Virtanen et al., 2018
49	Lacey et al., 2017	117	Voisin et al., 2011
50	Lam, Jimerson, et al., 2012	118	Vollet et al., 2017
51	Lam et al., 2014	119	Wallace & Chhuon, 2014
52	Lamote et al., 2013	120	Wang & Eccles, 2012a
53	Lara et al., 2018	121	Wang & Eccles, 2012b
54	Lawson & Lawson, 2013	122	Wang & Fredricks, 2014
55	Lawson & Masyn, 2015	123	Wang et al., 2019
56	J.-S. Lee, 2014	124	Wang & Peck, 2013
57	Lewis et al., 2011	125	Wang et al., 2011
58	Li & Lerner, 2011	126	C. Yang, Bear, et al., 2018
59	Li, 2018	127	C. Yang, Sharkey, et al., 2018
60	Lyons et al., 2013	128	C. Yang et al., 2020
61	Malone et al., 2017	129	G. Yang et al., 2017
62	Martinez-Fuentes et al., 2020	130	Yuen, 2016
63	McDermott et al., 2016	131	Yusof et al., 2017
64	McGill et al., 2012	132	Yusof et al., 2018
65	McKellar et al., 2020	133	Zendarski et al., 2017
66	Molinari & Mameli, 2018	134	Zhang et al., 2019
67	Molin-Karakoc & Ikola, 2019	135	Zhen et al., 2020
68	Moreira, Cunha, et al., 2020		

Note: Studies data and references are included in Appendix 3, presented as supplementary material in the online version of the article

**Table 2.** Main features of the included studies.

Study questions	Main categories		N	%
Year (SQ1)	2011-2015		40	29.63
	2016-2020		95	70.37
Country (SQ1)	North America		62	45.93
	Europe		39	28.89
	Asia		21	15.56
	Australia/ Oceania		7	5.19
	South America		4	2.96
	Africa		2	1.48
Concept (SQ2)	Main concept	School engagement	46	34.07
		Student engagement	43	31.85
		School and student engagement	16	11.85
		Student engagement in school	9	6.67
		Other terminology	21	15.56
	Dimensions	Two dimensions	48	35.56
		Three dimensions	66	48.89
		Four dimensions	12	8.89
		Five or more dimensions	5	3.70
Other dimensions	4	2.96		
Study design (SQ3)	Quantitative - cross sectional		78	57.78
	Quantitative - longitudinal		36	26.67
	Qualitative		7	5.19
	Quasi-experimental		6	4.44
	Literature reviews		4	2.96
	Mix methods		4	2.96
Assessment (SQ3)	Specific student engagement assessment measures		77	57.04
	Combined and adapted measures		21	15.56
	New and adapted items from other measures		20	14.81
	Interview, focus group, observation, or review		13	9.63
	Using both scales and observation		4	2.96
Topic (SQ4)	School	School adjustment	66	19.41
		Teacher-student interaction	39	11.47
		School environment	34	10.00
	Adolescent health		67	19.71
	Demographic characteristics		58	17.06
	Peers, family, and community		43	12.65
	Methodology and intervention		33	9.71
Suggestions (SQ5)	Student engagement research		310	/
	Student engagement promotion		222	/

Note: The results from studies' selection ( $n=135$ ). SQ4 and SQ5's highest total of observations is due to studies addressing more than one topic and including several suggestions.

### Research extent

Regarding the first study question (SQ1), results present a considerable increase in the studies from 2011-2015 (41 studies) to 2016-2020 (95 studies). The selection includes studies from 28 countries. Table 2 shows the importance of North America's contribution (62 studies), mainly from the United States (59 studies), followed by Europe (39 studies) and Asia (21 studies). Figure 2 presents the evolution of the studies' origin, where North American representation, although with the same number of studies, decreased from 76% in the first half of the decade to 33% in the second half. The difference is explained by

the increase of studies from Europe (36%), Asia (19%), and Australia/ Oceania (6.32%). On the other hand, there is a small but noteworthy percentage of studies from South America – three studies from Brazil (12, 29, 30) and one from Chile (53) - and from Africa - one study with Ghanaian students (2) and another with Angolan students (32).

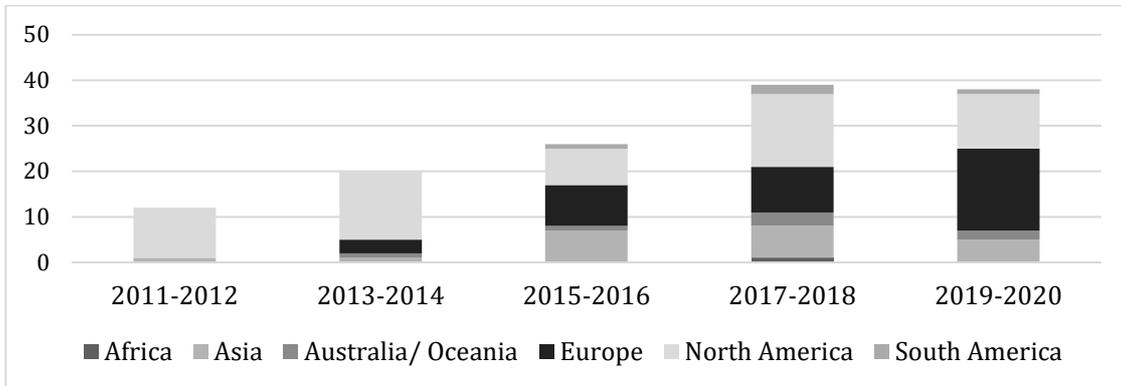


Figure 2. Studies' origin throughout the decade.

**Conceptual approaches**

On the concepts underpinning the studies (SQ2), four aspects were considered. The first was the terminological option, presented in Table 2. Despite our option to use *student engagement* as a search term, studies were mainly divided between *school engagement* (34.07%), *student engagement* (31.85%), and both (11.85%). *Other terminology* included *academic engagement* (5.93%), *engagement in learning* (5.19%), *classroom engagement* (2.96%) and *situational engagement* (1.48%).

The second aspect was multidimensionality. Figure 3 presents: (a) the results of the dimension options; (b) the existence of a theoretical perspective; and (c) the consistency between that theoretical perspective and the methodological and assessment choices. Evidence highlighted the three dimensions approach to *student engagement* (48.89% of the studies), mainly using the Behavioral, Emotional & Cognitive dimensions (42.96% of all the studies), and in many studies following Fredricks et al.'s (2004, 2005) approach (33 studies). Among two dimensions approaches, results highlighted the Behavioral and Emotional dimensions option (21.48%) after Skinner et al.'s (2009) approach (10 studies). What is distinct in Skinner et al.'s (2009) approach is the suggestion to complement the study of *student engagement* with student disengagement or disaffection, arguing that its effects go beyond the mere absence of engagement. With lesser studies, but noteworthy in the four dimensions approaches, was the option including Behavioral, Emotional, Cognitive, and Agentic engagement (5.19% of all the studies). The distinctiveness of this approach is the suggestion to include an agentic dimension that addresses the “process in which students intentionally and somewhat proactively try to personalize and otherwise enrich both what is to be learned and the conditions and circumstances under which it is to be learned” (Reeve & Tseng, 2011, p. 258).

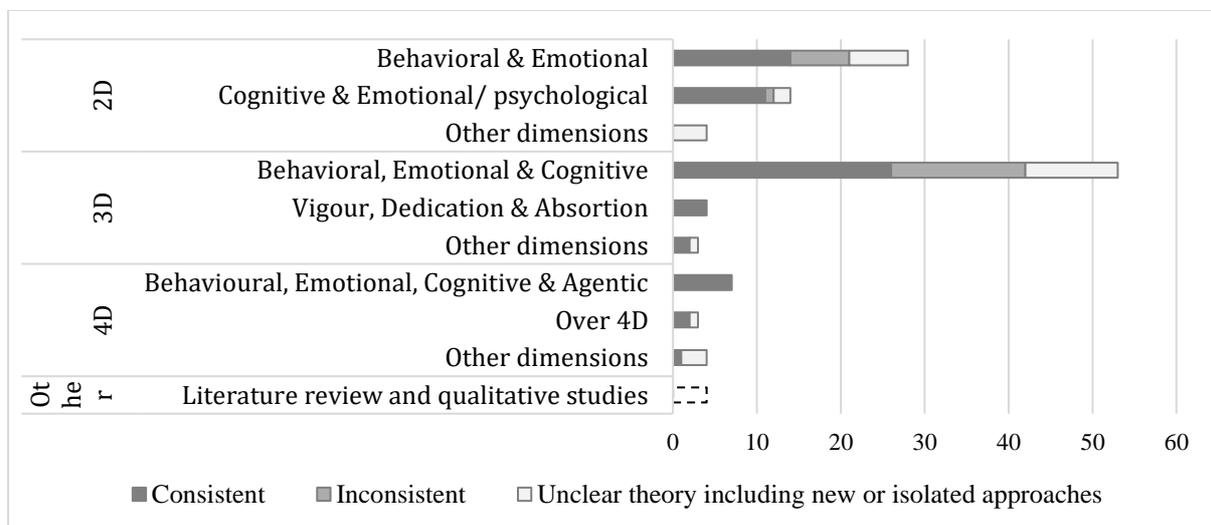


Figure 3. Student engagement dimensions and theoretical perspective options.

The third aspect considers the theoretical perspectives. Results presented in Figure 3 show that 67.41% of the studies (91 studies) followed a theoretical perspective and that in 49.63% of the studies (67 studies), this perspective was consistent with the assessment options. Moreover, consistency between the theoretical perspective and assessment options increased from 32.50% in the first half of the decade (40 studies) to 56.84% in the second half (95 studies). Conversely, studies with unclear theoretical perspectives decreased from 32.50% in the first half of the decade to 16.84% in the second half. Finally, the fourth aspect points out two recent studies (98, 123) that reinforced Skinner's suggestion of complementing engagement with the study of disengagement.

### Research designs and measures

Regarding the methodological approach (SQ3), Table 2 shows the prominence of quantitative designs (84.44%), stressing the high number of cross-sectional studies (57.78%) followed by longitudinal ones (26.67%) and the low frequency of studies with qualitative and mixed methods (11.11%), or with experimental designs (4.44%). Looking at the assessment measures, Table 2 shows that 87.41% of the studies used self-reported measures, including specific measures (57.04), combined or adapted measures (15.56%), or new/ adapted items (14.81%). Overall, the selected studies used 78 different self-report measures, of which only 17 were used consistently in more than one study and only six in five or more studies. The measures used in more than one study are presented in Table 3.

**Table 3.** Dimensions and measures used in more than one study.

Dimensions	Measures	N	%
2D	Engagement vs. Disaffection with Learning	12	15.58
	Student Engagement Instrument (SEI)	11	14.29
	Commitment to School Scale	5	6.49
	Research Assessment Package for Schools (RAPS) – Inst. Research and Reform in Educ.	3	3.90
	Behavioral, Emotional and Cognitive School Engagement Scale (BEC-SES)	2	2.60
3D	School Engagement Measure (SEM)	13	16.88
	School Engagement Survey (NCSE - National Center for School Engagement)	5	6.49
	Delaware School Engagement Scale (DSES)	4	5.19
	Student Engagement in School Scale (SES)	4	5.19
	Behavioral, Emotional and Cognitive School Engagement Scale (BEC-SES)	4	5.19
	Utrecht Work Engagement Scale (UWES)	4	5.19
	Student School Engagement Measure (SSEM)	2	2.60
4D	Student Engagement in School - 4D (SES-4D)	4	5.19
	Academic Engagement Scale	2	2.60
	Multifactorial Measure of Student Eng. (MMSE)	2	2.60

In the two dimensions approaches, results highlighted the *Engagement vs. Disaffection with Learning Scale* (Skinner et al., 2009), with 22 items to assess behavioral and emotional engagement and disaffection, and the *Student Engagement Instrument - SEI* (Appleton et al., 2006), with 35 items to assess cognitive (control and relevance of schoolwork, extrinsic motivation, and future aspirations) and emotional/ psychosocial engagement (teacher-student relation, peer support for learning and family support for learning). In the three dimensions approaches, results emphasized *School Engagement Measure - SEM* (Fredricks et al., 2005), with 19 items to assess behavioral, emotional, and cognitive engagement. Finally, in the four dimensions approaches, results emphasized *Student Engagement in School - 4 Dimensions Scale - SES-4D* (Veiga, 2016), with 20 items to assess behavioral, emotional, cognitive, and agentic engagement.

### Main topics and variables

Results for topics and variables (SQ4) included the main subjects of the studies. Table 4 presents the topics and the sets of variables. Overall results pointed to the breadth of the variables studied, covering adolescent students' school experience and psychosocial factors. The frequency of the variables presented in the studies indicates the prominence of *School* subjects (40.88% of all entries), including the topic of school

adjustment (19.41%), teacher-student relations (11.47%), and school environment (10.00%). However, when ranking the topics, the topic addressed in most studies was *Adolescent health* (67 studies), followed by *School adjustment* (66 studies). The former includes the set of variables addressed in most studies - *Individual strengths* (33 studies); the latter includes the second and third sets of variables addressed in most studies - *School problems* (22 studies) and *Academic achievement* (20 studies), respectively.

**Table 4.** Topics and Variables.

Topics	Variables with number of studies	N	%	
School	School adjustment	Academic achievement +20, Educational aspirations +4, Motivation +4, School problems +22, Minority or immigrant students +16	66	19.41
	Teacher-student relations	Support +13, Relation +14, Teaching methods +12		
	School environment	School type +8, Climate +8, Values +8, Violence +6, psychological needs +4		
Adolescent health	Well-being +15, Individual strengths +33, Risk factors +17, Information and communication technologies +2	67	19.71	
Demographic characteristics	Gender +20, Age/ grades +15, Cross-cultural differences +13, Socioeconomic status +7, Parents Education +3	58	17.06	
Peers, family, & community	Peer relation and friendship +16, Peer status +2, Family relations +2, Parenting +15,			
Methodology & intervention	Community violence +2, Prosocial behavior +1, Social support +5	43	12.65	
	Concept and theory +10, Measure validation +14, Intervention +9			
		33	9.71	

**School.** Regarding school experience, studies pointed out three main topics. The first is *School adjustment*, accounting for adolescents' role as students and their adaptation to school demands (APA, 2021). Studies confirmed the positive relationship between student engagement and *Academic achievement* (22, 42, 55, 56, 58, 68, 82, 83, 90, 105, 107, 116, 123, 124), with some nuances in studies where only vigor (a dimension of a student engagement approach including vigor, dedication, and absorption) was positively associated with academic achievement (9), or where more complex (25), low (32), or no association (43, 106, 120) was found. A positive relationship was also found between *Educational aspirations* and behavioral and cognitive engagement (83, 116, 124), or only cognitive engagement (120), possibly, as the authors suggest, because emotional engagement is connected to more social aspirations (120). Regarding *Motivation*, studies highlighted a positive relationship between student engagement and intrinsic motivation (19, 75, 93), mastery goal orientation (75), and, according to engagement's dimensions, mastery and performance goals orientation (108). On the other side of school adjustment, a negative association was found between *student engagement* and *school problems*, including previous academic difficulties (52, 88, 103, 104), school burnout (9, 25, 110, 116), low engagement, disengagement (30, 52, 59, 83, 98, 122), special needs (92, 133), adverse life experiences (79). Except for two studies (98, 106), *Minority or immigrant students* (42, 52) exhibited lower engagement, notably when experiencing discrimination (23, 62) or recent immigration (115). While results reflect minority or immigrant students' specific challenges, they valued the need for specific attention and support to foster their engagement (67, 119). In this context, while one study found evidence to value acculturation (101), others found empirical support for the paramount role of ethnic-racial identity and the identification with family cultural heritage (13, 62). On the *Teacher-student relation* topic, most studies presented evidence of its positive relationship with *student engagement* in all its dimensions (22, 25, 31, 45, 59, 67, 87, 88, 91, 94, 100, 118, 126 and 132) and, more decisively, for immigrant students (67). In this topic, studies highlighted: (a) *Teacher support* (11, 12, 16, 28, 50, 74, 79, 89, 108, 116, 121) as the most critical key variable for *student engagement* in many studies, above family and peer support (12, 50, 79), except in an African Sub-Saharan sample, possibly due to the contextual differences in teacher-student relations (2); and (b) *Pedagogical strategies*, which favor autonomy support over control instructional practices (17, 32, 43), instructional quality (22, 84), classroom emotional management (16, 84), student perception of being heard, known, and taken seriously (119), instructional feedback (84), connective instruction, academic rigor, and lively teaching (14). One study underlined the risk of teachers overlooking behaviorally engaged students who are not emotionally or cognitively so (86). In the *School environment* topic, one variable was *School type*. In Brazil, public school students presented higher engagement (29.30); in Virginia (US), higher engagement was found in students from urban schools, schools with integrated lower and upper secondary levels, higher parental education, and fewer minority students (61); a study found higher *student engagement* for adolescents in specialized classes of their

choice instead of regular classes (77). The second variable was *School Climate*, which positively related to engagement (22, 27), beyond demographic factors (127), and especially among minority students (48). Evidence valued: perception of an authoritative school climate, including support and disciplinary structure (47, 48); perception of intentional efforts to address students' needs and their identification with the school (45) and facilities' quality (132). The third variable was *Values*, pointing to *student engagement's* positive association with participation, clear rules (132), equity (20, 108), justice (66), human values (29), student cohesiveness (108) and school safety (106); and its negative association with perception of *Violence*, whether it was bullying (15, 49, 112, and 127), cyberbullying (128), or sexual harassment (15). The fourth variable was *Psychological needs*, with studies presenting a positive relationship between student engagement and perception of autonomy, competence, and relatedness (32, 66, 99, and 113).

**Adolescent health.** This category accounts for behaviors, activities, or factors related to adolescent health as complete well-being (APA, 2021). The *well-being* variable category included the positive relationship between *student engagement* and subjective (60, 102) and social-emotional well-being (68, 99), purpose in life (3), life satisfaction (3, 33), and positive affect (3), where *student engagement* appeared as a predictor (9, 91), or as being predicted by well-being (82), life satisfaction (37, 57, 130), and positive affect (37). The variable category *Individual strengths*, retrieved from APA's thesaurus definition of strengths-based interventions (APA, 2021), was the category addressed in most studies, portraying the positive relationship between *student engagement* and many individual strengths such as: resilience (3, 44, 96, 97, 115), self-concept (4, 94, 96, 114), self-regulation (80, 104), character strengths (30), self-esteem (116), belief in self (106), coping (89), creativity (1), gratitude (135), grit (19), persistence (63), self-awareness (80), self-determination skills (80), perfectionism (18), intentional behavior change (70), social and emotional competences (126), self-efficacy (11.79) but not in all studies (82); personality traits (71) or strengths (46, 88), and, conceptually, with identity (14). Some studies suggested that grit (19), self-concept (96), and especially hope (8, 63, and 113) could predict engagement.

Regarding the *Risk factors* variable category, *student engagement* appeared as a protective factor for at-risk students (25) and, therefore, positively related to sexual health (81), sleeping quality (23), or coping with traumatic events (135), and negatively related to externalizing behaviors (76, 115), internalizing behaviors, mental problems (58, 107), delinquency (40, 58, 122), aggressivity (42), substance use (58, 122), truancy (116), or depression (124). Finally, two studies on *Information technologies* (IT) pointed out the negative association between student engagement and the extent of hedonic (versus utilitarian) use of IT (86) and cyberbullying (128).

**Demographic characteristics.** Regarding *Gender*, most studies presented higher *student engagement* in girls (24, 25, 28, 50, 58, 83, 84, 97, 98, 102, 108, 116, 121, and 130). As exceptions, in some studies, no differences were found (30), and higher results were found in emotional engagement (27, 126), cognitive engagement (25, 125), or agentic engagement (66) for boys. As regards *Age/grades*, except for one example (66), studies reported a decrease of engagement in all dimensions across adolescence (4, 12, 24, 28, 29, 90, 97, 120, 121, and 126) or only in emotional engagement (52), and cognitive or agentic engagement (114). Cyberbullying effects on *student engagement* were higher for younger adolescents (128), and higher *student engagement* was found for adolescents beyond compulsory education (20). Regarding *Cross-cultural differences*, studies underlined the overall importance of *student engagement* for adolescents, but with specificities related to racial/ethnic background (55, 58, 59, 125, 126) and also cultural background, which was confirmed in samples from China (31, 134), Abu Dhabi (129, 131), Ghana (2), Malaysia (32), Angola (43), and East Asia (11). With *Socioeconomic status*, some studies found no differences between students (27, 55, 116), while others pointed to the positive relationship between socioeconomic status and *student engagement* (52, 55, 58, 111, 116), with one study predicting engagement (130). Finally, study results also valued *Parents' education* as a predictor of *student engagement* (25, 61, and 130).

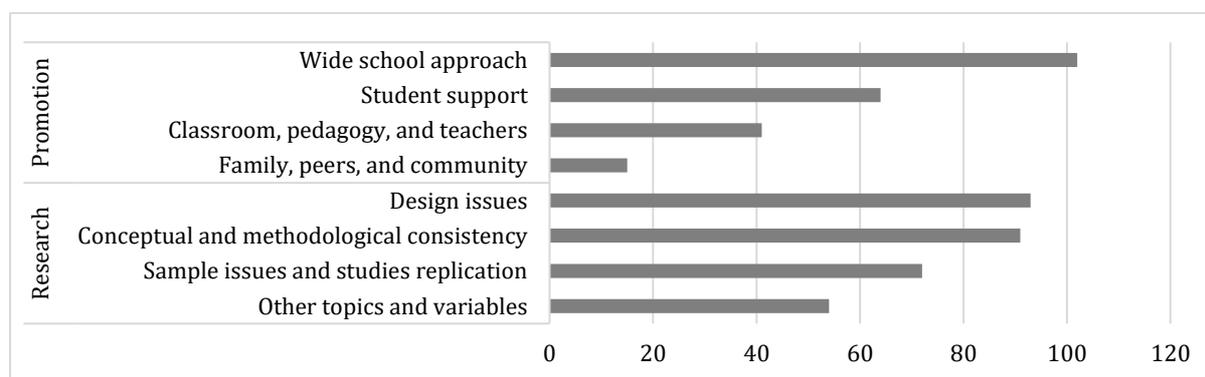
**Family, peers, and community.** Two studies on *Family relations* brought forward the role of a nurturing family environment, with low conflict and high cohesion, in *student engagement* (35, 96). Other studies focused on *Parenting* as a critical factor for adolescents' engagement in school (121), underlining parent support (2, 89, and 116), attachment (40), monitorization, autonomy support, warmth (39), authoritative parenting style (5), and involvement (64). Except for a Malaysian sample, where parent support was the most critical regarding *student engagement* (43), parent support appeared in some studies after teacher support, but in front of peer support (2, 12, 50, and 79). Regarding *Peer relation and friendship*, except for a Sub-Saharan sample, in which peer support was the strongest predictor of *student engagement* (2), and a study in which no relationship was found (116), peer support for *student engagement* was reinforced (33.132), after teachers' support and parents' support (12, 28, 43, 50, 118, 121), but with added value for

students with low support from teachers (118). It also seemed to be often related to emotional engagement (28, 94, 96, and 126) and dependent on the quality of peer relations (31, 73, 88, and 118). About *Peer status*, a study found evidence that the nomination of perceived popularity predicted students' future engagement (134) and, in another study, that *student engagement* is positively related to likability but negatively related to popularity (24). Within *Community*, some studies emphasized *student engagement's* positive relationship with general social support (10, 130, and 135), the existence of boundaries (10), religious filiation (130), prosocial behavior (115), and a negative relationship with community violence exposure (6, 117).

**Methodology and intervention.** *Methodology and intervention* was the topic addressed in fewer studies (9.71%). Regarding *Concept and theory*, studies explored general assumptions on *student engagement's* malleability, learning, and distinction from student's motivation (54), the existence of a bifactor model (21, 41, 123), the relationship between dimensions (2, 11, 25, 66), the study of disengagement (21), and person-centered approaches (55). Another set of studies focused on *measures validation* (1, 36, 51, 53, 68, 69, 78, 90, 95, 105, 109, 125, and 131). About *Intervention*, only nine references were found. These studies focused on experiential learning interventions like sailing (38), cooking (34), or cooperative methods (85), with visible and long-lasting results on student engagement, possibly by reinforcing social skills and network (38, 72). Other studies highlighted the value of positive psychology in the curricula (102), strengths-based approaches (72), school ethos, values (26), and counseling strategies (26) to foster student engagement.

### Suggestions for student engagement research and promotion

Figure 4 presents the results for suggestions (SQ5). Regarding research, we considered four sets of suggestions. In *Design issues*, studies suggested a bigger investment in experimental designs (27, 33, 40, 42, 43, 58, 59, 85, 87, 93, 107, 113, 114, 121), qualitative designs (59, 116, 129, 132), in person-centered approaches (73, 83, 122, 124), and the study of the reciprocity between variables (2, 24, 49, 88, 118, 121). In *Methodological consistency* issues, including self-report reliance and inconsistency between concepts and measures, studies suggested more complementary multi-method, multi-informant, and more objective indicators (5, 18, 19, 28, 43, 47, 48, 50, 77, 84, 91, 102, 120, 123, 124, 125), and the strive for increased theoretical and methodological consistency (e.g., 9, 87, 90, 131). In *Sample issues*, studies suggested confirming results using new or more representative samples. In the *Other topics and variables* issues, suggestions valued cross-cultural research (11, 41, 43, 68, 94, 116, 122), racial or ethnic specificities (6, 76) using an *emic* approach to grasp *student engagement* within cultural contexts (78), student disengagement (10, 95, 120, 123), dimensions of *student engagement* (10, 25, 27, 62, 65), *student engagement* in broader development ecologies (87, 88, 121), or in the interaction between systems (10). Finally, in the same set, studies suggested to deepen *student engagement* relationship with variables like peers (24, 73, 79, 118), teachers (118), parents (132), classroom strategies (38, 87, 108, 115), school norms and values (61, 81, 108, 126), violence (6, 15, 117), culture influence (23, 62, 129), students strengths (63, 80), information technologies (86), identity (14), life satisfaction (37), motivation (95), previous difficulties (22), and gender (75).



**Figure 4.** Suggestions for research and intervention.

Note. Other topics and variables: (a) cultural specificities; (b) broader development ecologies (c); disengagement and other engagement dimensions; (d) other variables.

*Student engagement's* malleability and protective strength are strong arguments for its promotion. While some studies suggested programs (10, 24, 30, 48, 49, 61, 65, 73, 80, 81, 93, 102, 103, 106, 116, 117), others offered practical suggestions synthesized in Figure 4. In the category, *Wide school approach* suggestions valued broad (8 studies) but tailored interventions (10 studies), enrolling all school resources, including

counselors and psychologists (11 studies), and valuing a closer school-family-community relation (6 studies). Studies also suggested the investment in a welcoming, supportive, and caring environment (32 studies), school belonging (6 studies), and school values such as clear and fair rules, equity, justice, diversity, inclusion, safety, and nonviolence (16 studies), and catering for adolescents' needs and well-being (10 studies). On *Student support* suggestions, studies pointed to *student engagement* assessment as a diagnosis opportunity (17 studies) as well as on-set interventions (10 studies) and strategies including the promotion of students' strengths (14 studies), attention to students with difficulties, at-risk or with low engagement (14 studies), and attention to minority or immigrant students (9 studies). In the *Classroom, pedagogy, and teachers* category, suggestions valued action toward emotional and relational aspects of the classroom (13 studies), the quality of teacher-student relation (13 studies), the shift to ensure the "student in the center" participation, cooperation, and life subjects (10 studies), self-assessment, self-interest and student needs (9 studies), and teacher training (5 studies). *Family, peers, and community* suggestions included fostering warmer and more supportive family environments and parental relations (7 studies), parental training (4 studies), supporting positive peer-relations (3 studies), and informing policymakers (1 study).

## DISCUSSION

This section discusses the main findings regarding extension, conceptual and methodological options, topics and variables, and suggestions in light of extant literature, closing with the presentation of the implications and limitations of the study.

### A field in expansion

The steep increase of research extent (SQ1) in quantity and geographical breadth is consistent with other reviews (Campos et al., 2020; Salmela-Aro et al., 2021), which have also emphasized research growth in Europe, especially after the *First International Congress on Student Engagement in School* (Veiga et al., 2021). However, while an earlier literature review focused on longitudinal studies (Salmela-Aro et al., 2021), the European countries with most studies were Belgium (9 studies) and Finland (6 studies), in this study selection, the countries with most studies were Portugal (10 studies), Spain (7 studies), and Finland (5 studies). Despite the research's growth, in line with other reviews' findings (Campos et al., 2020; Salmela-Aro et al., 2021), much of Africa, Asia, and South America was poorly represented. These findings, which may fit Arnett's (2008) criticism of American psychology's tendency to be centered on 5% of the population and often stripping concepts of their cultural contexts, confirm the gap in *student engagement* research, which hinders conceptual clarity regarding resource-limited contexts (Ansong et al., 2017). They showed that the research's vision of *student engagement* is narrow and should expand to encompass different realities and experiences, particularly non-western and resource-limited geographies and contexts (Campos et al., 2020; Chiu et al., 2012; Lam et al., 2016). Results from studies in our selection from Africa, Asia, and South America backed up the assertion by pointing out the critical role of *student engagement* in adolescence, yet with contextual and cultural specificities, which require further research on cultural differences (Reschly & Christenson, 2012).

### The quest for consistency is paying off

Regarding conceptual and methodological options (SQ2 and SQ3), there is a terminological blur in our selection. First, between *student engagement* and *school engagement* or other terms, thus confirming the overlap of terminologies and definitions (McGrath & Van Bergen, 2015). Secondly, in theory, labels, content, and items confirming other authors' claims for clarification and convergence (Lam et al., 2014; Li, 2011; Reschly & Christenson, 2012). Nevertheless, without overlooking this conceptual and methodological variability, 91 studies presented a clear theoretical stance, 67 studies presented some consistency between the theoretical and the methodological options, and 77 quantitative studies used specific measures to assess multidimensional *student engagement*. Moreover, throughout the decade, the percentage of studies with some consistency between theory and assessment options increased, and studies with unclear theoretical focus decreased. Is it possible that warnings about haziness are paying off? These results may simultaneously express the effort toward the concept's delimitation from other educational concepts (Lawson & Lawson, 2013; Wang & Degol, 2014) and an increasing conceptual and methodological consistency (Fredricks et al., 2005; Reschly & Christenson, 2012).

Regarding multidimensionality options, findings confirmed the lead of the behavioral-emotional-cognitive engagement approach after Fredricks et al.'s (2004, 2005) suggestion (Archambault et al., 2019; Lawson & Lawson, 2013; Salmela-Aro et al., 2021). Likewise, the most frequently used measures were in syntony with earlier systematizations (Campos et al., 2020; Salmela-Aro et al., 2021). Nevertheless, a

novelty within the fourfold *student engagement* approaches was found: the prominence of the agentic approach (Reeve & Tseng, 2011) and the *Student Engagement in School 4D Scale* (Veiga, 2016).

Studies' reliance on self-report measures also confirms other literature reviews (Campos et al., 2020; Salmela-Aro et al., 2021). Despite criticism regarding self-reported measures, including biased results and lack of rigor, authors underlined the value of these measures in capturing students' perceptions and dimensions that cannot be observed directly (Salmela-Aro et al., 2021). Finally, some studies suggested the need to consider student disengagement as a distinct concept beyond the mere absence of engagement in line with the work of Skinner et al. (2009). It is a point that deserves further study (Reschly & Christenson, 2012; Wang & Degol, 2014).

### **An asset to adolescent development**

If the most visible finding regarding topics and variables (SQ4) was the breadth of subjects, the most striking was *student engagement's* critical role in adolescents' health, including the positive relationship between *student engagement* and adolescents' well-being and individual strengths. These findings matter for three reasons. Firstly, they justify the protective role of *student engagement* in adolescents' healthy and positive development (Archambault et al., 2019; Upadaya & Salmela-Aro, 2013; Veiga, Burden, et al., 2014). Secondly, they affirm that school is a critical developmental setting for adolescents and that *student engagement* impact surpasses mere school adjustment (Wang & Degol, 2014; Wang & Hofkens, 2020). Thirdly, they confirm the positive relationship between *student engagement* and self-development (Murphy & Holste, 2016), including self-concept, self-regulation, hope, grit, character strengths, self-esteem, coping, creativity, gratitude, and persistence, thus opening new avenues for research and intervention.

In *ex-aequo* with well-being, findings pointed out the positive relationship between *student engagement* and school adjustment, confirming the expected relationship with academic achievement (Lei et al., 2018; Upadaya & Salmela-Aro, 2013; Wang & Degol, 2014). Nevertheless, they also reiterated the negative association of *student engagement* with: (a) school problems, including previous academic difficulties, special needs, low engagement, disengagement, adverse life experiences, or non-supportive family contexts (Lei et al., 2018; Veiga et al., 2016); and (b) specific challenges that minority or immigrant students face (Chiu et al., 2012; Rivas-Drake et al., 2014; Roorda et al., 2011; Veiga et al., 2021). These results are a warning: *student engagement* is paramount, but the engagement in school of students facing specific problems or challenges demands special attention and support (Reschly et al., 2014; Veiga et al., 2016), requiring educators to go beyond one-size-fits-all solutions (Wang & Degol, 2014). This warning is even more challenging when evidence confirms teacher-student relation as the key variable of *student engagement* (McGrath & Van Bergen, 2015; Muñoz-Hurtado, 2018; Quin, 2017; Roorda et al., 2011, 2017), especially for students struggling with academic, personal, or social vulnerabilities (McGrath & Van Bergen, 2015; Murphy & Holste, 2016; Roorda et al., 2011).

With lesser studies and a smaller influence, evidence reinforced the role of adolescents' relations with parents on their engagement in school. Despite the increasing influence of peers during adolescence, parents continue to be critical. Finally, results also valued the relations with peers, which depend on the peer's features and the quality of the relationship (e.g., 73, 88, and 114). Other authors confirmed both findings (e.g., Lam et al., 2016; Veiga et al., 2016). Regarding peers, findings suggest that teachers should take peer relations seriously. After all, willingly or not, teachers play a major role in promoting positive and healthy relations both in school and the classroom (Muñoz-Hurtado, 2018). Reinforcing this idea, the title of one selected study is: "In peer matters, teacher matter" (118). Another meaningful result was the cumulative effect of student relations, pointing out the need to study *student engagement* in the framework of adolescents' multilevel ecologies (Quin, 2017; Wang & Degol, 2014). This discussion (e.g., Murphy & Holste, 2016; Wang & Hofkens, 2020) brings about the findings emphasizing how school climate, school values, and school opportunities hinder or promote *student engagement*. Concerning demographic variables, with noteworthy exceptions, evidence confirmed extant literature emphasizing higher *student engagement* for girls, younger adolescents, higher socioeconomic status, higher parents' education, and an overall decrease across adolescence (Lei et al., 2018; Roorda et al., 2011; Veiga, Burden, et al., 2014), even across different countries (Lam et al., 2014, 2016).

### **Promising prospects for research and promotion**

Research suggestions (SQ5) include more experimental and qualitative designs, bigger conceptual and methodological consistency, and more representative samples, thus echoing extant literature (Li, 2011; Quin, 2017; Salmela-Aro et al., 2021; Wang & Degol, 2014). More subtle and concrete suggestions focused on complementing variable-oriented research with person-centered analysis (Lawson & Lawson, 2013; Salmela-Aro et al., 2021; Upadaya & Salmela-Aro, 2013) and investing in the study of cultural specificities

beyond western contexts (Reschly & Christenson, 2012), disengagement, and the interplay between *student engagement* dimensions (Li, 2011; Reschly & Christenson, 2012; Roorda et al., 2017; Salmela-Aro et al., 2021; Upadyaya & Salmela-Aro, 2013; Wang & Degol, 2014). The fact is that knowledge about *student engagement's* dimensions may prevent overlooking disengaging students, such as students who are behaviorally engaged, thus complying with their tasks, but not emotionally so (e.g., 86), or gifted students whose engagement, regardless of their acceptable grades, is deteriorating (Landis & Reschly, 2013). In both cases, students may be at risk of poor mental health (e.g., 58, 124), as confirmed in other studies (Wang & Degol, 2014). Among the suggestions on different variables, one study theoretically suggested the relations between *student engagement* and identity (14), the central task of adolescent development. Although the hypothesis appeared in other studies (e.g., 54, 71) and reviews (Murphy & Holste, 2016; Wang & Hofkens, 2020), no evidence was found beside the positive relationship between *student engagement* and ethnic and racial identity (13, 62), reinforcing the role of ethnic and racial identity in adolescent school adjustment (Carvalho & Veiga, 2022; Rivas-Drake et al., 2014). In sum, it is noteworthy that, despite the multiple references to the effect of *student engagement* on adolescent development (e.g., 90), no study addressed the relationship between *student engagement* and more comprehensive adolescent psychosocial development.

Regarding suggestions for promotion (SQ5), studies agreed on *student engagement* malleability or sensitivity to the context (Quin, 2017). However, in the face of broad agreement on *student engagement* prominence in adolescents' healthy growth and school adjustment and the concept's responsivity to intervention, it is odd that studies on promotion were so few. The same happened in earlier reviews (Campos et al., 2020; Salmela-Aro et al., 2021). Maybe researchers avoided more experimental or quasi-experimental studies (Campos et al., 2020), or there is a gap between abundant interventions and the frailty of the assessment perspectives (Archambault et al., 2019). Nevertheless, studies valued the fit between adolescents' developmental needs and the school setting's opportunities and demands (Archambault et al., 2019; Upadyaya & Salmela-Aro, 2013; Wang & Hofkens, 2020). For educators to achieve it, two strategies gained visibility. The first is to promote school values and a supportive and caring environment to which students can identify, rich in opportunities to develop students' individual strengths (Murphy & Holste, 2016). The second is to balance *wide or whole-school* interventions with tailored actions addressing the unique needs of classrooms and students (Muñoz-Hurtado, 2018; Wang & Degol, 2014; Wang & Hofkens, 2020), with particular attention to the engagement in school of adolescents facing academic, developmental, or social difficulties or challenges, including earlier academic difficulties, special needs, giftedness; or minority or immigrant students (Chiu et al., 2012; Landis & Reschly, 2013; Lawson & Lawson, 2013; Roorda et al., 2011; Upadyaya & Salmela-Aro, 2013; Veiga et al., 2021; Wang & Degol, 2014). Other suggestions brought up the subject of teacher training and support, which may strengthen their abilities to foster engagement in school by promoting: (i) a supportive and caring environment; (ii) opportunities to develop students' *strengths*; and (iii) positive interpersonal relations and peer-group functioning (Muñoz-Hurtado, 2018; Veiga et al., 2016). Unfortunately, while studies confirmed the role of teacher-student relation in the academic adjustment of older students, eventually counterbalancing new chores and the decrease of engagement (Roorda et al., 2011), the quality of teacher-student relations seems to decrease with age (McGrath & Van Bergen, 2015; Roorda et al., 2011). Older students tend to perceive their teachers as less caring and supportive (e.g., 59), and teachers, in turn, tend to feel that their role is not so important as students get older (Roorda et al., 2011), thus investing more in instructional practices than in the students' emotional support (Roorda et al., 2017). This avoidable mismatch justifies a bigger articulation effort between knowledge of *student engagement* and school practices.

### Implications and limitations

*Student engagement* is a promising but hazy study field that requires systematization (Salmela-Aro et al., 2021). By using a rigorous methodology, focusing on adolescents' multidimensional *student engagement*, and encompassing longitudinal and cross-sectional studies, this study complements previous reviews, thus extending knowledge on research and useful from the perspective of both study and action. However, important limitations must be borne in mind when considering the results. One is the exclusive use of *student engagement* in the search strategy, leaving out studies using other terms like *school engagement* or *engagement in learning*. The option was consistent with this study's aims, which were not the exhaustive characterization of research but, as stressed by the reference to studies in the title and the research problem, a selection of studies oriented by APA's thesaurus concept and explicitly focusing on adolescence. Because of the gigantic endeavor of embracing all research on *student engagement*, future contributions should focus on more specific approaches or dimensions. Suggestions include the development of *student engagement* throughout adolescence and the relation between *student engagement* and students' personal and social development. In this endeavor, it could be enlightening to complement electronic database

searches with a well-justified and transparent analysis of the studies' reference lists and a hand-search of key journals and authors. This action could ensure the presence of relevant articles that may be missing in the results of database searches (Arksey and O'Malley, 2005). Another limitation was the feeble representation of non-western studies. This major shortcoming, which may be due to the western and US bias in electronic database search results (Arksey and O'Malley, 2005), could be outweighed by using regional databases and grey literature to increase studies' representativity. Similarly, the small presence of qualitative research is also visible. Possibly, the focus on multidimensional approaches undermined the selection of broader qualitative studies. Another issue, due to time and resource constraints, was the difficulty of including Arksey and O'Malley's (2005) sixth phase, suggesting the inclusion of a previous discussion of the findings with different stakeholders.

### Conclusion

By thoroughly selecting and analyzing last decade studies on multidimensional *student engagement* in adolescents, this study complemented previous literature systematizations. It offers a helpful reference to discuss the extension of research on *student engagement* (SQ1), conceptual approaches (SQ2), methodological options (SQ3), main topics and variables (SQ4), and suggestions for future study and promotion (SQ5).

Results confirmed the increase and geographical widening of the studies, suggesting the need for further study of *student engagement* in non-western contexts and more resource-limited realities. The study also confirmed the conceptual and methodological haziness that characterizes the study field. However, at the same time, the number of studies striving for a clear theoretical ground, and sounder methodological options, allowed the hypothesis of an increased effort towards more consistent approaches. At this level, to improve understanding of *student engagement*, its dimensions, and their interplay, studies are challenged to invest in more experimental and qualitative designs.

Topics and variables findings emphasized the critical role of *student engagement* in adolescents' well-being as a key protective factor regarding risk behaviors and mental health. These arguments favored *student engagement* as a priority for school settings, school activities, and school policies. Nevertheless, studies also showed the importance of specific support to students facing academic, social, or specific constraints or challenges, like minority or immigrant students. Regarding *student engagement* variables, research emphasized teacher-student relations followed by students' individual strengths and school environment.

When considering promotion, results pointed out *student engagement* assessment as a strategy to avoid overlooking disengaging students. Research also suggested the potential of enhancing adolescents' individual strengths, which are strongly related to *student engagement*. Other studies underlined both the effect of caring and supportive environments that pervade students' school experience and the attention to the classroom's emotional and relational aspects. Perhaps these affective aspects are like blood to the human body for engagement in school. So, as long as the affective parts are not well taken care of, there will continue to be a reason to investigate *student engagement* and the need for new beginnings.

### REFERENCES

- Alfvén, T., Dahlstrand, J., Humphreys, D., Helldén, D., Hammarstrand, S., Hollander, A.-C., Målqvist, M., Nejat, S., Jørgensen, P. S., Friberg, P., & Tomson, G. (2019). Placing children and adolescents at the centre of the Sustainable Development Goals will deliver for current and future generations. *Global Health Action*, 12(1), 1670015. <https://doi.org/10.1080/16549716.2019.1670015>
- Ansong, D., Okumu, M., Bowen, G. L., Walker, A. M., & Eisensmith, S. R. (2017). The role of parent, classmate, and teacher support in student engagement: Evidence from Ghana. *International Journal of Educational Development*, 54, 51–58. <https://doi.org/10.1016/j.ijedudev.2017.03.010>
- APA. (2021). *Thesaurus of Psychological Index Terms*—APA Publishing. <https://www.apa.org/pubs/databases/training/thesaurus>
- Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools*, 45(5), 369–386. <https://doi.org/10.1002/pits.20303>
- Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring cognitive and psychological engagement: Validation of the Student Engagement Instrument. *Journal of School Psychology*, 44(5), 427–445. <https://doi.org/10.1016/j.jsp.2006.04.002>
- Archambault, I., Janosz, M., Goulet, M., Dupéré, V., & Gilbert-Blanchard, O. (2019). Promoting student engagement from childhood to adolescence as a way to improve Positive Youth Development and school completion. In J. A. Fredricks, A. L. Reschly, & S. L. Christenson (Eds.), *Handbook of Student*

- Engagement Interventions* (pp. 13–29). Elsevier. <https://doi.org/10.1016/B978-0-12-813413-9.00002-4>
- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19–32. <https://doi.org/10.1080/1364557032000119616>
- Arnett, J. J. (2008). The neglected 95%: Why American psychology needs to become less American. *American Psychologist*, 63(7), 602–614. <https://doi.org/10.1037/0003-066X.63.7.602>
- Campos, L. V., Schmitt, J. C., & Justi, F. R. dos R. (2020). Um panorama sobre engajamento escolar: Uma revisão sistemática: An overview of school engagement: A systematic review. *Revista Portuguesa de Educação*, 33(1), 221–246. <https://doi.org/10.21814/rpe.18145>
- Carvalho, N. A., & Veiga, F. H. (2022). Psychosocial Development Research in Adolescence: A Scoping Review. *Trends in Psychology*, Article 143. <https://doi.org/10.1007/s43076-022-00143-0>
- Chiu, M. M., Pong, S., Mori, I., & Chow, B. W.-Y. (2012). Immigrant students' emotional and cognitive engagement at school: A multilevel analysis of students in 41 countries. *Journal of Youth and Adolescence*, 41(11), 1409–1425. <https://doi.org/10.1007/s10964-012-9763-x>
- Eccles, J. S., & Roeser, R. W. (2011). Schools as Developmental Contexts During Adolescence. *Journal of Research on Adolescence*, 21(1), 225–241. <https://doi.org/10.1111/j.1532-7795.2010.00725.x>
- Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research*, 59(2), 117–142. <https://doi.org/10.3102/00346543059002117>
- Fredricks, J. A., Blumenfeld, P., Friedel, J., & Paris, A. (2005). School engagement. Em K. A. Moore & L. H. Lippman (Eds.), *What do children need to flourish?* (Vol. 3, pp. 305–321). Springer US. [https://doi.org/10.1007/0-387-23823-9\\_19](https://doi.org/10.1007/0-387-23823-9_19)
- 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(1), 59–109. <https://doi.org/10.3102/00346543074001059t>
- Lam, S., Jimerson, S., Shin, H., Cefai, C., Veiga, F. H., Hatzichristou, C., Polychroni, F., Kikas, E., Wong, B. P. H., Stanculescu, E., Basnett, J., Duck, R., Farrell, P., Liu, Y., Negovan, V., Nelson, B., Yang, H., & Zollneritsch, J. (2016). Cultural universality and specificity of student engagement in school: The results of an international study from 12 countries. *British Journal of Educational Psychology*, 86(1), 137–153. <https://doi.org/10.1111/bjep.12079>
- Lam, S., Jimerson, S., Wong, B. P. 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>
- Landis, R. N., & Reschly, A. L. (2013). Reexamining gifted underachievement and dropout through the lens of student engagement. *Journal for the Education of the Gifted*, 36(2), 220–249. <https://doi.org/10.1177/0162353213480864>
- Lawson, M. A., & Lawson, H. A. (2013). New conceptual frameworks for student engagement research, policy, and practice. *Review of Educational Research*, 83(3), 432–479. <https://doi.org/10.3102/0034654313480891>
- Lei, H., Cui, Y., & Zhou, W. (2018). Relationships between student engagement and academic achievement: A meta-analysis. *Social Behavior and Personality: An International Journal*, 46(3), 517–528. <https://doi.org/10.2224/sbp.7054>
- Li, Y. (2011). School engagement: What it is and why it is important for positive youth development. In R. M. Lerner, J. V. Lerner, & J. B. Benson (Eds.), *Advances in child development and behavior* (Vol. 41, pp. 131–160). Elsevier. <https://doi.org/10.1016/B978-0-12-386492-5.00006-3>
- McGrath, K. F., & Van Bergen, P. (2015). Who, when, why and to what end? Students at risk of negative student-teacher relationships and their outcomes. *Educational Research Review*, 14, 1–17. <https://doi.org/10.1016/j.edurev.2014.12.001>
- Muñoz-Hurtado, J. (2018). The role of teachers on students' peer groups relations: A review on their influence on school engagement and academic achievement. *Límite (Arica)*, 13(42), 30–43. <https://doi.org/10.4067/S0718-50652018000200030>
- Murphy, J., & Holste, L. (2016). Explaining the effects of communities of pastoral care for students. *The Journal of Educational Research*, 109(5), 531–540. <https://doi.org/10.1080/00220671.2014.993460>
- Patton, G. C., Sawyer, S. M., Santelli, J. S., Ross, D. A., Afifi, R., Allen, N. B., Arora, M., Azzopardi, P., Baldwin, W., Bonell, C., Kakuma, R., Kennedy, E., Mahon, J., McGovern, T., Mokdad, A. H., Patel, V., Petroni, S., Reavley, N., Taiwo, K., ... Viner, R. M. (2016). Our future: A Lancet commission on adolescent health

- and wellbeing. *The Lancet*, 387(10036), 2423–2478. [https://doi.org/10.1016/S0140-6736\(16\)00579-1](https://doi.org/10.1016/S0140-6736(16)00579-1)
- Quin, D. (2017). Longitudinal and contextual associations between teacher–student relationships and student engagement: A systematic review. *Review of Educational Research*, 87(2), 345–387. <https://doi.org/10.3102/0034654316669434>
- Reeve, J., & Tseng, C.-M. (2011). Agency as a fourth aspect of students' engagement during learning activities. *Contemporary Educational Psychology*, 36(4), 257–267. <https://doi.org/10.1016/j.cedpsych.2011.05.002>
- Reschly, A. L., & Christenson, S. L. (2012). Jingle, jangle, and conceptual haziness: Evolution and future directions of the engagement construct. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 3–20). Springer US. <https://doi.org/10.1007/978-1-4614-2018-7>
- Rivas-Drake, D., Markstrom, C., Syed, M., Lee, R. M., Umaña-Taylor, A. J., Yip, T., Seaton, E. K., Quintana, S., Schwartz, S. J., & French, S. (2014). Ethnic and racial identity in adolescence: Implications for psychosocial, academic, and health outcomes. *Child Development*, 85(1), 40–57. <https://doi.org/10.1111/cdev.12200>
- Roorda, D. L., Jak, S., Zee, M., Oort, F. J., & Koomen, H. M. Y. (2017). Affective teacher–student relationships and students' engagement and achievement: A meta-analytic update and test of the mediating role of engagement. *School Psychology Review*, 46(3), 239–261. <https://doi.org/10.17105/SPR-2017-0035.V46-3>
- Roorda, D. L., Koomen, H. M. Y., Spilt, J. L., & Oort, F. J. (2011). The influence of affective teacher–student relationships on students' school engagement and achievement: A meta-analytic approach. *Review of Educational Research*, 81(4), 493–529. <https://doi.org/10.3102/0034654311421793>
- Salmela-Aro, K., Tang, X., Symonds, J., & Upadyaya, K. (2021). Student Engagement in Adolescence: A Scoping Review of Longitudinal Studies 2010–2020. *Journal of Research on Adolescence*, 31(2), 256–272. <https://doi.org/10.1111/jora.12619>
- Skinner, E. A., Kindermann, T. A., & Furrer, C. J. (2009). A motivational perspective on engagement and disaffection: Conceptualization and assessment of children's behavioral and emotional participation in academic activities in the classroom. *Educational and Psychological Measurement*, 69(3), 493–525. <https://doi.org/10.1177/0013164408323233>
- Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., ... Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, 169(7), 467. <https://doi.org/10.7326/M18-0850>
- UNESCO. (2012). *International Standard Classification of Education—ISCED 2011*. UNESCO Institute for Statistics (UIS). <http://uis.unesco.org/en/topic/international-standard-classification-education-isced>
- Upadyaya, K., & Salmela-Aro, K. (2013). Development of school engagement in association with academic success and well-being in varying social contexts: A review of empirical research. *European Psychologist*, 18(2), 136–147. <https://doi.org/10.1027/1016-9040/a000143>
- Veiga, F. H. (2016). Assessing student engagement in school: Development and validation of a four-dimensional scale. *Procedia - Social and Behavioral Sciences*, 217, 813–819. <https://doi.org/10.1016/j.sbspro.2016.02.153>
- Veiga, F. H., Burden, R., Appleton, J. J., & Galvão, D. (2014). Student's engagement in school: Conceptualization and relations with personal variables and academic performance. *Revista de Psicología y Educación*, 9(1), 29–47.
- Veiga, F. H., Festas, I., García, Ó. F., Oliveira, Í. M., Veiga, C. M., Martins, C., Covas, F., & Carvalho, N. A. (2021). Do students with immigrant and native parents perceive themselves as equally engaged in school during adolescence? *Current Psychology*. <https://doi.org/10.1007/s12144-021-02480-2>
- Veiga, F. H., Robu, V., Conboy, J., Ortiz, A., Carvalho, C., & Galvão, D. (2016). Students' engagement in school and family variables: A literature review. *Estudos de Psicologia (Campinas)*, 33(2), 187–197. <https://doi.org/10.1590/1982-02752016000200002>
- Wang, M.-T., & Degol, J. (2014). Staying engaged: Knowledge and research needs in student engagement. *Child Development Perspectives*, 8(3), 137–143. <https://doi.org/10.1111/cdep.12073>
- 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>

### **CRedit AUTHORSHIP CONTRIBUTION STATEMENT**

**Nuno A. Carvalho:** Conceptualization; Methodology; Data curation; Formal analysis; Writing – original draft; Writing – Review & editing. **Feliciano H. Veiga:** Conceptualization; Methodology; Supervision; Writing – Review & editing.

### **ACKNOWLEDGMENTS**

The authors thank Rita Fonseca and Michael Daly for critical support in revising the text.

### **FUNDING**

This work was supported by the FCT - Fundação para a Ciência e a Tecnologia, IP, within the scope of the UIDEF - Unidade de Investigação e Desenvolvimento em Educação e Formação, under the reference UID/CED/04107/2020.

### *History of the manuscript*

Received	31/07/2022
Accepted	06/02/2023
Published (online)	06/06/2023
Published	15/12/2023