



Active Student Participation in Whole-School Interventions in Secondary School. A Systematic Literature Review

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Abstract

This review presents a reasoned synthesis of whole-school interventions seeking to improve the overall school environment by fostering active student participation (ASP) in school activities and decision-making processes. The aims are to describe the selected programs, assess their methodological quality, and analyze the activities soliciting ASP. Among the 205 publications initially provided by the literature search in the academic databases PsycINFO and Education Research Complete, 22 reports met the inclusion criteria of presenting whole-school interventions that solicit ASP in secondary schools, and were thus included in the review. Such publications referred to 13 different whole-school programs, whose implemented activities were distinguished on a 5-point scale of ASP levels, ranging from *Very high ASP*, when students were involved in a decision-making role, to *Very low ASP*, when students were the passive recipients of content provided by adults. This review contributes to the literature by proposing an organizing structure based on different levels of ASP, which provides clarity and a common ground for future studies on student participation. Overall, the in-depth description of activities offers a framework to researchers and practitioners for planning interventions aimed at improving the learning environment and contributing meaningfully to the far-reaching goal of encouraging student participation in school life.

Keywords Active student participation · Whole-school intervention · Secondary school · Student involvement · Program activities

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Introduction

Research in educational psychology is consistent in showing that the quality of the school environment largely affects student well-being. Indeed, students' experiences of a supportive school context have a significant impact on positive behaviors, such as academic achievement (Brand et al., 2008; Hoy, 2012) and good relationships among students and between students and staff (Cohen et al., 2009; Thapa et al., 2013). Conversely, the poor quality of the learning environment predicts negative outcomes, such as substance use (Weatherson et al., 2018) or bullying (Låftman et al., 2017).

In view of this, schools need to face the challenge of implementing interventions aimed at changing and improving the learning environment in the direction of promoting positive behaviors and reducing negative outcomes. One of the most promising directions in this regard is based on the adoption of whole-school approaches whose key features are the focus on overall school systems instead of on specific problems (Bonell et al., 2018).

The literature on whole-school interventions is broad (see, for example, Charlton et al., 2021, for an extensive review on whole-school interventions focused on school climate), but it suffers from two major gaps. First, it relies primarily on programs applicable to elementary schools, while studies on high school populations are rarer, presumably because of the multiple challenges derived from the implementation of programs in such complex contexts (Estrapala et al., 2021; Vancel et al., 2016). Second, despite the importance generally attributed to the active involvement of students in the programs, to our knowledge, no previous reviews have specifically investigated the degree and the characteristics of student participation in such interventions. To address these limitations, in this article, we present a systematic literature review on whole-school interventions carried out in secondary schools and based on programs that envisage students' active participation and involvement.

Whole-School Interventions for Improving the Learning Environment

In educational research, some reviews and meta-analyses (Charlton et al., 2021; Merrell et al., 2008; Voight & Nation, 2016) have critically synthesized and discussed studies on school interventions aimed at improving the learning environment. These programs have considered different outcomes of improvement, ranging from a general focus on school climate dimensions—e.g., relational aspects, institutional organization, and safety—to more specific aspects, such as bullying, violence, or substance use. However, the degree of effectiveness of such programs remains controversial. For example, a meta-analysis by Ttofi et al. (2008) indicated that school-based bullying prevention programs were able to bring about positive results, while another meta-analysis on the same topic (Merrell et al., 2008) concluded that evidence in this direction was only modest.

More positive results concerning the effectiveness of interventions were reported by Allen (2010) with reference to programs conducted by means of a whole-school approach. In her literature overview of studies designed to reduce bullying

and victimization, the author concluded that whole-school interventions generally showed at least marginal evidence of improvement. Despite these encouraging findings, the studies conducted with a whole-school approach in secondary education contexts were rare. Among these, a well-established framework of whole-school interventions mostly implemented in middle schools is the *School-Wide Positive Behavior Support* program (for reviews, see Gage et al., 2018; Noltemeyer et al., 2019), which is a multi-tiered framework engaging students, school staff, and families for the delivery of evidence-based behavioral support aligned to students' needs (Horner et al., 2004). By and large, the study results in this framework are again promising in suggesting a connection between such programs and school improvement, although the evidence is generally moderate and only regards a few of the considered outcome measures.

The mixed or weak results reported in the cited reviews solicit further exploration of the specific characteristics of whole-school interventions. In particular, a major limitation of the literature is the lack of an in-depth analysis of the types of activities proposed to students in each program, especially as far as their direct involvement is concerned. Given the importance attributed to student engagement in school life (Markham & Aveyard, 2003), this is a relevant area of inquiry that can inform researchers and practitioners willing to design and conduct whole-school interventions calling for students' involvement.

Student Involvement in School Intervention

The importance of students' involvement and participation finds a theoretical ground in the self-determination theory (see Ryan & Deci, 2017), according to which people who are self-determined perceive themselves as causal agents in life experiences, being proactive and engaged in the social environment. Studies examining such human disposition in adolescence supported the relevance of self-determination for quality of life and identity development (Griffin et al., 2017; Nota et al., 2011) and as a full mediator in the negative association between stress and school engagement (Raufelder et al., 2014).

In the light of these assumptions, educational and school psychologists have launched scientific and professional debates on the ways in which schools can implement favorable conditions for students to feel active and co-responsible for their educational and academic pathways (Carpenter & Pease, 2013; Helker & Wosnitza, 2016; Schweisfurth, 2015). These debates have reached consensus across-the-board on the recognition that school change and improvement are best fostered by intervention programs in which students are offered opportunities to get actively involved in school life (Baeten et al., 2016; Voight & Nation, 2016). For this goal to be achieved, all educational agencies are called upon to promote interventions capable of supporting activities that require student involvement and participation (Antoniou & Kyriakides, 2013).

The importance of students' active participation in the school environment has also been confirmed by a substantial amount of literature investigating over time the association between high student involvement and positive learning environments. Mitchell (1967) reported that school climate is related to the extent

of student participation and interaction during school life. Epstein and McPartland (1976) showed that student opportunities for school involvement were related to satisfactory outcomes. In a 1982 review published, Anderson claimed that “the type and extent of student interaction that is possible within a school appears to be a significant climate variable” (Anderson, 1982; p.401). A few years later, Power et al. (1989) described a program implemented in several contexts and characterized by high student involvement, whose results showed that a high rate of student participation led to their capacity to take on responsibility for building an effective learning environment and positive climate. More recent studies (Vieno et al., 2005) have confirmed that democratic school practices, such as student participation in decision-making processes, play a significant role in the development of a sense of community at individual, class, and school levels. The review by Thapa et al. (2013) confirmed the importance of student classroom participation as a variable affecting school climate and academic achievement.

On these theoretical and empirical grounds, providing space to student voices in decision-making and school change emerges as a powerful strategy for improving school environments and enforcing the success of programs (Mitra, 2004). The construct of student agency fits in well with this approach, as it refers to the students’ willingness and skill to act upon activities and circumstances in their school lives (Lipponen & Kumpulainen, 2011). Representing adolescents’ authentic, proactive, and transformative contributions to school life (Grazia et al., 2021), agency is fostered by school environments capable of soliciting and valorizing students’ active participation in educational practices and school decisions (Makitalo, 2016) and encouraging them to feel co-responsible with teachers and staff for their school lives (Mameli et al., 2019). The value of agency has been confirmed by research showing its positive associations with motivation and the fulfilment of basic psychological needs (Jang et al., 2012) as well as with the perception of supportive teaching (Matos et al., 2018).

Despite the agreement on student participation as a crucial feature for the success of programs capable of improving students’ school life, to our knowledge, previous literature reviews on school interventions have not focused specifically on the extent and way in which students are given a voice and are involved in the programs. In view of this, in the present work, we set out to search, in the existing literature, for interventions specifically based on activities in which students were not just the recipients of activities but rather took on an active and decision-making role. For our purposes, we use the notion of *active student participation* (ASP) to include the variety of ways in which students are given the opportunity to participate actively in school activities and decisions that will shape their own lives and those of their peers.

Review’s Aims

Previous reviews (Charlton et al., 2021; Estrapala et al., 2021; Voight & Nation, 2016) have provided extensive descriptions of whole-school interventions aimed at improving school environments or reducing school problems, suggesting their

effectiveness. Moreover, a growing amount of literature has found that students' active involvement in their school life is a crucial feature for improvement. Our general goal was to move forward by conducting an in-depth examination of existing whole-school interventions based on activities promoting ASP in secondary schools, by providing a reasoned synthesis of their characteristics and implementation. The choice to focus on secondary schools was driven by the evidence that this developmental stage has so far received less attention in whole-school intervention research (Estrapala et al., 2021; Vancel et al., 2016).

Given the large heterogeneity of existing intervention programs, both in terms of participants (specific subgroups vs general student population) and targets of improvement (specific abilities vs general school environment), it was essential to set clear boundaries for the study selection. As this was a novel undertaking, we chose to focus on whole-school interventions directed to the overall student population and aimed at improving the school climate as a whole. This allowed us to select a reasonably homogeneous sample of studies, with the confidence that future reviews will advance our knowledge by considering more specific fields and populations.

The review's aims were (a) to describe the selected programs on the basis of their focus, country, duration, age of participants, and research design; (b) to assess the soundness of the research design and methodologies adopted in each study in order to provide evidence of the methodological quality of the selected programs; and (c) to differentiate among various levels of ASP in the program's activities and, for each of these levels, to describe methods and activities carried out in the programs.

Method

The present review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses 2020 updated statement (PRISMA 2020; Page et al., 2021). In line with the terminology proposed by the authors, in the following sections, we use the term *study* for every investigation that includes a well-defined group of participants and one or more interventions and outcomes, *report* for every document supplying information about a particular study (a single study might have multiple reports), and *record* for the title and/or abstract of a report indexed in a database. In addition, for the specific purposes of the present review, we use the term *program* when referring to an implemented whole-school intervention that has specific characteristics and is usually named, since more than one study may be conducted with the same program.

Eligibility Criteria

Studies were eligible for inclusion in the review if they were (i) written in English language; (ii) published in peer-reviewed academic journals; and (iii) aimed at assessing psychological effects of whole-school interventions that solicit ASP in secondary schools; thus, studies in which students were involved solely as recipients of activities delivered by adults were excluded. Moreover, in line with the review's

aims described above, studies were excluded from the review if they were (i) focused on specific subgroups of students (e.g., ethnic minorities or LGBTQ students); (ii) solely aimed at improving specific skills (e.g., literacy or mathematics); and (iii) solely focused on physical health (e.g., nutrition or physical activity).

Information Sources and Search Strategy

A literature search was conducted via EBSCO, including the academic databases PsycINFO and Education Research Complete, last consulted on April 9, 2022. The entered search terms were school-wide interventions OR whole-school interventions OR school-wide programs OR whole-school programs OR school-wide trainings OR whole-school trainings AND secondary school OR high school OR secondary education. By means of the software's automated procedure, we searched these terms in the abstracts and filtered the results according to the first two inclusion criteria, selecting articles in English and published in peer-reviewed academic journals.

Selection and Data Collection Process

The records of each study were screened by two researchers, and the potentially relevant studies were further assessed for eligibility by three researchers, who read the full text independently. Moreover, some records relevant to the purposes of the research were identified through the references of the included documents (*forward snowballing*; Wohlin, 2014). Data from each included report were searched by two researchers, who worked independently to extrapolate the information relevant to the review, which were (a) the study characteristics; (b) the indicators of methodological quality; and (c) the program activities.

Results

Detailed information about the selection process is provided in the PRISMA flow diagram (Fig. 1). The literature search provided 205 total records, and reduced to 169 after the automatic deduplication provided by EBSCO. After the application of our inclusion and exclusion criteria, 62 records were selected for full text reading. Of the 107 excluded records, 37 did not report interventions (e.g., they presented only school surveys), 25 were informative papers on initiatives and/or interventions without assessments, 15 focused only on academic skills attainment, 11 referred to primary schools, 10 focused on minorities, 6 were reviews of books or DVDs, and 3 only evaluated physical health as an outcome. After the full text reading of the 62 selected reports, 48 were excluded as they only discussed aspects related to implementation (e.g., feasibility or fidelity) without assessing the psychological effects of the intervention on students ($n=23$) or did not solicit ASP during the intervention ($n=25$). Thus, 14 reports were included in the sample. In addition, 10 reports were identified by sifting through the references of the selected documents

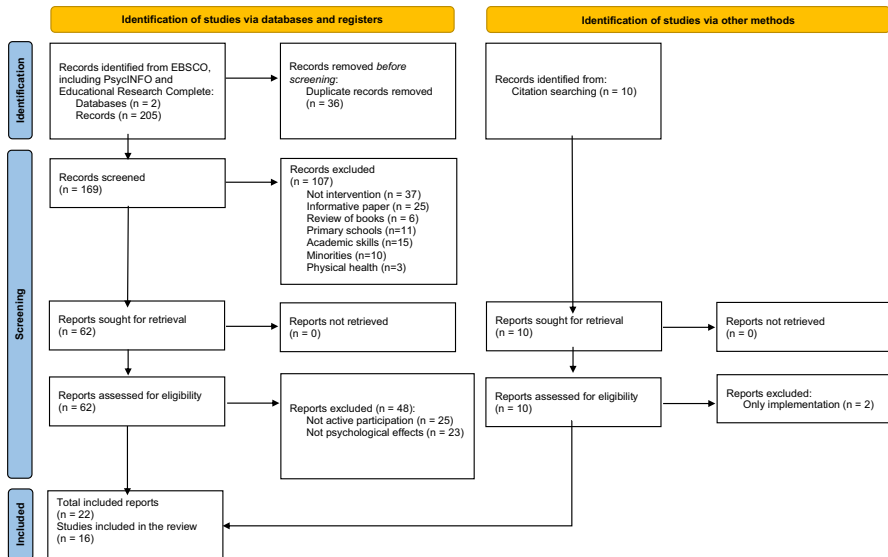


Fig. 1 PRISMA flow diagram

(forward snowballing; Wohlin, 2014). After the full text reading, two of them were excluded as they did not assess the effects of the intervention. At the end of the selection process, the final sample of the present review included 22 reports, which referred to 16 studies and 13 programs.

Study Characteristics

The main information about each study is reported in Table 1. As for the focus of the interventions, three macro-areas were identified: (a) prevention of violence (nine studies and twelve reports), including programs for less bullying, cyberbullying, dating violence, sexual violence, and aggression; (b) promotion of mental health (five studies and seven reports), including programs for addressing depression and suicide risk and for promoting general psychological health; (c) promotion of positive emotional and relational school climate (two studies and three reports), including programs for enhancing school connectedness and school climate.

Within each macro-area, in Table 1, the programs are listed following the alphabetical order of the program name. Out of the studies focused on preventing violence, three referred to unnamed anti-bullying programs, which in the present review were labeled *Anti-bullying_1*, *Anti-bullying_2*, and *Anti-bullying_3*; the other studies on the topic referred to an anti-cyberbullying program named *Cyber Friendly School*; an anti-bullying program named *Friendly School*; a bystander program aimed at preventing dating violence and sexual violence, named *Green Dots*; a program aimed at preventing bullying and aggression, named *Learning Together*; and an anti-bullying program named *STAC*, which stands for Stealing the

Table 1 Main information about the studies

Program ID	Study	Focus	Country	Duration	Grades	Schools	Design	Report ID
Prevention of violence								
AB1	Anti-bullying_1	Bullying	USA	3	9–12	1	O	AB1_Allen_2010
AB2	Anti-bullying_2	Bullying	UK	1	7	4	QUAL	AB2_Fletcher_2015
AB3	Anti-bullying_3	Bullying	China	1	6	4	EGC	AB3_Wurf_2012
CFS	Cyber friendly schools	Cyberbullying	Australia	3	8–10	35	EGC	CFS_Cross_2016
FS	Friendly schools	Bullying	Australia	2	8–9	21	EGC	FS_Cross_2018
GD	Green dots	Dating and sexual violence	USA	5	9–12	26	EGC	GD_Coker_2019
LT	Learning together	Bullying and aggression	UK	4	6–9	40	EGC	LT_Bonell_2018
ST	STAC (a)	Bullying	USA	1	9–12	1	O	LT_Melendez_2021
	STAC (b)	Bullying	USA	1	10–12	1	O	ST_Doumas_2019a
							EGC	ST_Doumas_2019b
							EGC	ST_Johnston_2018
							EGC	ST_Midgett_2019
Promotion of mental health								
BB	Beyond blue	Depression	Australia	3	7–9	50	EGC	BB_Sawyer_2010
GH	Gatehouse project	Mental health	Australia	3	8–9	26	EGC	GH_Bond_2004
							EGC	GH_Patton_2006
SS	Sources of strengths (a)	Suicide risk	USA	1	9–12	4	EGC	SS_Petrova_2015
	Sources of strengths (b)	Suicide risk	USA	4	9–12	20	O	SS_Pickering_2018
	Sources of strengths (c)	Suicide risk	USA	2	9–12	18	QUAL	SS_Williford_2021
							EGC	SS_Wyman_2010
Promotion of positive emotional and relational school climate								
RJ	Restorative justice	Student outcomes	USA	7	9–12	1	QUAL	RJ_Gonzalez_2019
SE	SEHER	School climate	India	2	9	75	EGC	SE_Shinde_2018
							EGC	SE_Singla_2020

Note. EGC, Experimental Group Comparison design; O, quantitative analyses not consistent with the EGC design; QUAL, qualitative analyses; SEHER, Strengthening Evidence base on school-based interventions for promoting adolescent health; STAC, Stealing the show, Turning it over, Accompanying others, Coaching compassion

show, Turning it over, Accompanying others, Coaching compassion. The studies focused on promoting mental health comprised a school research initiative aimed at preventing depression, named *Beyond blue*; an intervention aimed at promoting mental health, named *Gatehouse Project*; and a program to prevent suicide risk, named *Sources of Strengths*. Out of the studies focused on promoting positive emotional and relational school climate, one referred to the *Restorative Justice* program, aimed at promoting healthy and trusting relationships within the school, and the other referred to a program aimed at the promotion of a good school climate, named *SEHER*, which stands for Strengthening Evidence base on scHool-based intErventions for pRomoting adolescent health.

A large majority of the studies were conducted in the USA, some were carried out in Australia and the UK, and a few studies in India and China. The studies varied in duration, ranging from one to seven school years, and the number of schools involved in the intervention, ranging from 1 to 75. About half of the studies involved students from all grades while the other half was targeted only for some grades. Lastly, the reports varied in its research design: the majority conducted experimental group comparisons (EGC), but also other quantitative research designs (O) were present along with some qualitative designs (QUAL). To make text and tables more readable, the 13 included programs were renamed with a *program ID* consisting of the initials of the program name. Similarly, the 22 included reports were renamed with a *report ID*, consisting in the *program ID* followed by the surname of the first author and the publication year, all separated by underscores. *Report ID* and *Program ID* are reported in Table 1.

Assessment of Methodological Quality

To assess each report's methodological quality, we searched in the literature for a rigorous and comprehensive set of indicators and eventually decided to use as a reference the standards for evidence-based practices identified by the Council for Exceptional Children (CEC, 2014), which include indicators on setting and program description, fidelity, and reliability of outcome measures. Although the standards were originally recommended for the specific field of special education, they are considered appropriate to evaluate studies in all educational settings and were previously used by Charlton et al. (2021) in a systematic review studying the effects of school-wide interventions on school climate perceptions. Given that our aim was not to identify evidence-based practices but more generally to assess the methodological quality of the reports included in the review, some of the identified indicators were not applicable to our material. For this reason, among all the indicators described in the document (CEC, 2014), we selected those that provided a general overview of each report's methodological quality. The selected indicators, their corresponding number in the CEC document, and a short description for each are reported in Table 2.

In more detail, we applied a more extensive set of indicators to reports which fit the CEC definition of experimental group comparison design (EGC, as reported in Table 1), where participants were divided into two or more groups,

both randomly and non-randomly, to test the effects of the interventions. For reports based on qualitative analyses and on quantitative analyses not consistent with the EGC design (QUAL and O, as reported in Table 1), we used a more limited set of indicators (indicators 1 to 6, as described in Table 2) and included a brief description of the research aims and methods. In the assessment of methodological quality, interrater reliability was achieved as three independent researchers read each report in detail, and the attribution of each indicator was discussed and agreed upon.

The assessment of methodological quality for the EGC reports is summarized in Table 3. The findings show that most studies were strong in contextualizing the research, clearly describing the intervention program (either directly or with references to previous work) and conducting quality analyses. Weak points emerged to be related to the assessment of fidelity implementation (indicators 4 and 5 in Table 3), both with reference to adherence to the intervention program and to the dosage received by participants. Results for studies with qualitative analyses or quantitative analyses not EGC are reported in Table 4. Like the EGC reports, most of these studies appeared strong in contextualizing the research and describing the intervention program, while fidelity of implementation received less attention (indicators 4 and 5 in Table 4).

Levels of Active Student Participation

As required by our inclusion criteria, all the selected programs were based on interventions that solicited ASP. However, from the careful analysis of the studies, we realized that the program activities promoted very different forms of ASP. Three independent researchers thus considered in detail each activity described in the programs and eventually agreed to score it on a 5-point scale (see Table 5), distinguishing among activities that solicit various levels of ASP. The scale partly followed the school participation scale of the HBSC questionnaire as defined by De Róiste et al. (2012). It ranged from *Very high* levels of ASP, attributed to activities in which students were given a fully decision-making role, to *Very low* levels of ASP, given to activities in which students were just the recipients of activities delivered by adults. In line with our inclusion criteria, in no programs, students were involved solely as recipients of activities delivered by adults (*Very low* ASP). Moreover, levels were not mutually exclusive, so that each program might include different levels of ASP.

In Table 5, we report all the considered ASP levels, with the specifically related activities, and the coding of each program. It should be specified that the distribution of activities in the various levels was based on a qualitative accurate analysis of the role attributed to students and not on the number of students involved in each program's activities, which varied to a great extent. In more detail, *Very high* ASP was attributed to interventions in which students were involved in processes with a direct organizational impact on school roles, curricula, and policies; this included two types of activities, i.e., student involvement in decision-making processes and the formation of school action teams comprising students. *High* ASP

Table 2 Indicators of methodological quality adopted in this review

Indicator	Number given in CEC document	Brief description
1	1.1	Context and setting: the study describes critical at least some relevant features (e.g. type of school, geographical location, socioeconomic status)
2	2.1	Participants: the study describes at least some relevant demographics (e.g. gender, age, grade, ethnicity)
3	4.1	Description of practice: the study describes detailed intervention procedures and intervention agents' actions or cites accessible sources
4	5.1	Implementation fidelity: the study assesses and reports implementation fidelity related to adherence with direct measures
5	5.2	Implementation fidelity: the study assesses and reports implementation fidelity related to dosage or exposure with direct measures
6	6.2	Internal validity: the study describes control conditions (e.g. curriculum or intervention)
7	6.3	Internal validity: control condition participants have no or extremely limited access to the treatment intervention
8	6.4	Internal validity: the study describes assignment to groups randomly or non-randomly but based on appropriate techniques
9	6.8	Internal validity: overall attrition is low across groups
10	6.9	Internal validity: differential attrition between groups is low or controlled for
11	7.2	Outcome measures: the study describes measurement of the outcome variables
12	7.3	Outcome measures: the study reports effects of the intervention on all outcome variables, not only those for which a positive effect is found
13	7.4	Outcome measures: frequency and timing of outcome measures is appropriate (e.g. at least pre-post data points)
14	7.5	Outcome measures: the study provides evidence of adequate internal reliability of the measures adopted (e.g. Cronbach's alpha)
15	8.1	Data analysis: the techniques are appropriate for comparing change in two or more groups

For detailed information on each indicator, see the standards for evidence-based practices identified by the Council for Exceptional Children (CEC, 2014)

was recognized when students were still involved in organizational activities, but their role was limited to the implementation of activities and did not directly impact on school curricula and policies; it consisted of three activities, i.e., presentation of students' works, leading of activities for peers, and leading of activities for adults. *Moderate ASP* was attributed when students were asked to express their viewpoints and opinions, without having a decision-making power, however; it comprised activities in which students were called to express their points of view on various school issues, either by the provision of platforms to share ideas, concerns, or suggestions, or by the organization of interactive school assemblies, or by their involvement in surveys based on data collection (e.g., by means of questionnaires) on specific aspects of their school life. *Low ASP* was attributed when the students' activation was limited to a specific task required within a structured format designed by other people, including training for student leaders, interactive group activities, and individual activities. Finally, activities were coded as *Very low ASP* when students were involved as the passive recipients of contents provided by adults, through lecture-style lessons, viewing of videos, or distribution of didactic material. The activities provided for in each program are described at length in the following paragraphs, considering activities scored in every specific level of ASP.

For the sake of completeness, in Table 5, we added a final column in which we indicated additional program activities that involved the staff. They comprised the formation of school action teams made up of adults, training, and the provision of

Table 3 Assessment of methodological quality for reports with EGC design

Report	Indicators of methodological quality														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AB3_Wurf_2012	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓
CFS_Cross_2016	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FS_Cross_2018	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GD_Coker_2019	*	*	✓	*		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
LT_Bonell_2018	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
ST_Doumas_2019a	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
ST_Doumas_2019b	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
ST_Midgett_2019	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BB_Sawyer_2010	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
GH_Bond_2004	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
GH_Patton_2006	✓	✓	✓				✓	✓			✓	✓	✓		✓
SS_Petrova_2015	✓	✓	✓					✓			✓	✓		✓	✓
SS_Wyman_2010	✓	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓	✓
SE_Shinde_2018	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Reports explicitly abiding to the indicator requirements are marked with the symbol ✓; reports marked with the symbol * indicate that authors refer to other reports to signal abidance to the indicator requirements; reports not abiding to the indicator requirements or where information was not explicitly stated are left blank

Table 4 Assessment of methodological quality for reports with qualitative analyses or quantitative analyses not consistent with the EGC design

Report	Indicators of methodological quality						Brief description
	1	2	3	4	5	6	
AB1_Allen_2010	✓	✓	✓			na	Comparison of pre- and post-non-matched groups
AB2_Fletcher_2015	✓	✓	✓			na	Qualitative assessment of participants experiences in the intervention
LT_Melendez_2021	✓	✓	✓	✓	✓		Analysis of latent profiles transition after intervention and comparison with control group
ST_Johnston_2018	✓	✓	✓			na	Single-group repeated-measures design with qualitative assessment of participants experiences in the intervention
SS_Pickering_2018	✓	✓	✓		✓	na	Analysis of exposure and predictors of exposure to the intervention program
SS_Williford_2021		✓	✓			na	Qualitative analysis of participants characteristics and processes leading to intervention success
RJ_Gonzalez_2019	✓	✓	✓			na	Case study on intervention implementation
SE_Singla_2020	✓	✓	✓			✓	Analysis of the mediating role of school climate between intervention and outcome variables (depressive symptoms and violence)

Reports explicitly abiding to the indicator requirements are marked with the symbol ✓; reports not abiding to the indicator requirements or where information was not explicitly stated are left blank; *na*, the indicator was not applicable to the report

materials for the staff. As the description of these activities goes beyond the scope of our investigation, we will not describe them in detail.

Very High ASP: Making School Rules

As can be seen in Table 5, activities implying *involvement of students in decision-making processes* were identified in six programs. In AB3, during a school assembly, students were invited to develop a whole-school anti-bullying policy, while in later activities, they were asked to identify strategies to be implemented in the school to prevent bullying. In CFS, school staff and student leaders conducted whole-school activities helping students to review school policies to promote a positive use of technology. In FS, the intervention aimed to help the transition between primary and secondary school was co-developed with students who had already made such a transition. In GP, the use of peer support and leadership was encouraged to increase opportunities and skills for students to participate in decision-making processes within the school; in addition, at a classroom level, rules were negotiated by teachers and students and displayed in each classroom. In RJ, during the first year of implementation, staff and students developed a plan for pathways of primary, secondary, and tertiary restorative interventions; in the following years, students' leadership roles and collective decision-making activities increased, so that students themselves were able to advance whole-school initiatives and activities, to map out course goals and determine which projects they would embrace. Finally, in SE, some health policies were discussed with the principal, teachers, and students before being finalized in a school action team meeting and disseminated at whole-school level.

Activities consisting in the *creation of school action teams* (or school action groups) including students and teachers were identified in three programs (see Table 5). In AB2, a school action group with both students and staff was formed to define action plans and training for staff on restorative practices at whole-school level and to implement a new school curriculum focusing on social and emotional skills. In LT, a school action group comprising around six students and six staff was formed to lay down school policies and coordinate interventions, based on the feedback from the student data collection. In SE, a school health promotion committee, consisting of representatives from the school board, parents, teachers, and students, was formed to discuss issues submitted by the students and to plan the activities for the future years based on the feedback from the activities already carried out. In addition, a peer group of 10 and 15 students from each class discussed health topics and student concerns with adult facilitators, in order to develop an action plan and to help in organizing various activities, such as contests and school assemblies.

High ASP: Organizing School Events

Three types of activities were included in this level of ASP. As reported in Table 5, five programs solicited the *creation of different student artifacts*. AB1 included a student-made video on bullying to be presented to all the students. In GP, student artifacts were presented to audiences such as parents, other students, teachers, and

Table 5 Typologies of activities distinguished by levels of active student participation (ASP) and actions implying only adult involvement in each program

Program ID	Very high ASP, making school rules			High ASP, organizing school events			Moderate ASP, expressing personal views		
	Student involvement in decision-making processes	School team with students	Students' artifacts	Student-led activities for peers	Student-led activities for adults	Platform to share ideas	Interactive assemblies	Data collection on students	
AB1			✓				✓	✓	
AB2		✓							
AB3	✓						✓	✓	
CFS	✓			✓					
FS	✓								
GD									
LT		✓						✓	
ST									
BB									
GP	✓		✓			✓		✓	
SS			✓						
RJ	✓		✓						
SE	✓	✓	✓		✓	✓	✓	✓	

Table 5 (continued)

Program ID	Low ASP, trainings			Very low ASP, students as recipients			Adult involvement		
	Trainings for peer leaders	Group activities	Individual activities	Frontal lessons	Viewing of videos	Material for students	School Team with only staff	Trainings for staff	Material for staff
AB1				✓	✓	✓			✓
AB2								✓	
AB3		✓		✓	✓	✓			✓
CFS	✓	✓		✓					✓
FS								✓	✓
GD	✓			✓				✓	
LT		✓		✓				✓	✓
ST	✓								
BB		✓			✓			✓	✓
GP		✓					✓	✓	
SS	✓	✓						✓	
RJ		✓						✓	
SE		✓		✓				✓	

members of the community. In SS, student leaders made presentations for peers to share personal examples of using the strengths provided by the program. In RJ, students engaged in collaborative, interactive writing activities based on analytical reflection for the realization of a rubric co-developed by students. SE included the contribution of all the students, teachers, and the principal in the realization of works like write-ups, poems, pictures, or artwork, on specific topics for a monthly wall magazine publication. SE also envisaged contests among students, such as poster-making and essay writing, linked to the monthly topic of the wall magazine.

Activities regarding the organization of *student-led activities for peers* were found in four programs (see Table 5). In CFS, student leaders (four to six in each intervention school) conducted at least three important whole-school activities to promote students' positive use of technology for raising students' awareness of their rights and responsibilities online; they also provided cyberbullying prevention trainings for peers. In SS, student leaders (up to six in the school) conducted activities aimed at raising awareness of *Sources of Strengths*, generating conversations with other students, providing presentations about the strengths proposed by the program, and engaging peers to identify their own trusted adults. RJ included student-led restorative circles with students, workshops for students, and peer-to-peer mentorship on restorative practices. In SE, student leaders (between 10 and 15 in each class) conducted peer group meetings to discuss on relevant health topics.

In two programs, *student-led activities for adults* were organized (see Table 5). In CFS, student-led activities provided information to the teaching staff about the technologies used by students and cyberbullying prevention training given to parents. In RJ, circles and workshops on restorative practices were implemented by the students for the staff.

Moderate ASP: Expressing Personal Views

Three types of activities were included in this level of ASP. As can be seen in Table 5, two programs provided *platforms where students could express their personal views* on various topics. In BB, students, families, and school staff were provided with platforms to share information and communication on mental health issues. In SE, platforms were used to raise concerns, make complaints, and give suggestions, either anonymously or by self-identifying, on the intervention topics.

Interactive assemblies for students to discuss on the main intervention topics were organized in three programs (see Table 5). AB1 provided a first interactive school assembly to discuss respect and bullying, and later assemblies at class level to further discuss the themes emerged during the whole-school assembly. Similarly, AB3 included a school assembly where students were encouraged to get involved in the development of a whole-school anti-bullying policy, followed by three lessons during which the class teacher facilitated a discussion in each class aimed to raise awareness about bullying and to think about school-based solutions. SE included group discussions for generating awareness about health issues, to be discussed during the school assemblies that took place four times a month.

In six programs, students were given a voice by *data collections* to be used in the process of school changes (see Table 5). AB1 included a bullying report form that students, in addition to staff and parents, filled in to report bullying incidents. AB3 provided feedback from student data collection during the school assembly as a basis for discussing whole-school anti-bullying strategies. In LT, annual reports on students' needs, drawing from student surveys in relation to bullying, aggression, and school experiences, guided the action teams to define school policies and coordinate interventions. In BB, summaries of student and staff data on current school structures, policies, programs, and practices related to student well-being, collected annually, were used by the team to create an "action plan" for changes across the school, both at the classroom and whole-school level. In GP, the profile emerging from the student surveys on school environment guided school teams in the definition of priority areas and strategies within each school, both by coordinating existing health promotional work and introducing new strategies that met the needs of a specific school. In SE, the school action team planned school activities based on reports and discussions on issues presented by the students.

Low ASP: Trainings

A low level of ASP was identified in three types of activities. As can be seen in Table 5, four programs included *trainings for student peer leaders*. CFS provided a 10-h training for peer leaders to lead whole-school activities on the positive use of technology. GD provided a 5-h bystander training for student leaders to recognize situations and behaviors that could lead to violence or abuse and to identify active bystander behaviors to be performed either individually or collectively to reduce the risk or effect of violence. ST provided a 90-min training session and two 15-min booster sessions on bullying, which included icebreaker exercises, hands-on activities, and role plays. SS provided a 4-h interactive training for peer leaders aimed at developing protective resources in themselves and encouraging peers to grow such resources as well.

Eight programs included *interactive group activities* (see Table 5). In AB3, students worked in small groups to identify the types of bullying in the school and to discuss strategies to prevent bullying, with the support of bullying scenarios with discussion questions. In CFS, interactive activities included problem-solving, quizzes, and case studies on the use of technology to prevent cyberbullying. LT included various interactive activities aimed at preventing violence, ranging from informal practice, for example, using "affective" statements to communicate feelings, to formal practices, for example hosting a restorative "circle" where participants were encouraged to express emotions and create emotional bonds after problematic or disruptive behavior. BB provided a range of interactive teaching methods, such as small-group exercises, role plays, and quizzes, for reflecting on mental health issues. GP provided activities as small group work and class discussion, by also implementing interactive teaching strategies, such as using questions to kindle discussions and emphasizing the importance to consider different perspectives on a topic, encourage challenges, and debate ideas. SS included peer-to-peer messages and activities wherein student leaders shared examples of strengths that have helped

them to overcome personal challenges and invited their peers to participate in interactive tasks. RJ included many interactive practices, such as restorative circles, interactive writing activities, and peer-to-peer mentorship to broaden the impact of restorative practices. SE included monthly contests for students, such as elocution, debates, and quiz games.

Finally, in BB program, some *individual activities*, in addition to group tasks, were conducted (see Table 5). Such activities consisted of individual writings and self-reflection on specific topics, aimed at building or enhancing sense of self-worth, belonging, control, purpose, future, and humor, which were considered to protect against mental health problems.

Very Low ASP: Students as Recipients

Activities in which student's role was overall that of the recipients of actions taken from adults were of three types. As can be seen in Table 5, six programs included *lecture-style lessons*. AB1 included the speech by a nationally known speaker about respect and bullying and the presentation of the Social Support System to students by their English teachers. AB3 included the presentation of summary feedback from the pre-test questionnaires during a school assembly and three lessons, delivered by the class teachers, on school bullying. CFS included lessons led by class teachers, aimed at improving online social skills, focusing, in particular, on positive communication, resilience, self-management, conflict resolution, and social responsibility. GD included a 50-min persuasive lesson led by adults focused on violence victimization, perpetration, and prosocial behaviors. LT included adult-led lessons on social and emotional skills. SE organized workshops led by teachers or program facilitators on effective study skills, such as time management, learning style, note-taking, reading comprehension, memorization techniques, and concentration techniques.

Three programs included the *viewing of videos* during the implementation (see Table 5). AB1 and AB3 provided a video on school bullying for all the students. BB provided video or DVD materials on mental health issues.

Finally, three programs provided students with *informative materials* (see Table 5). AB1 provided a form with several responses for intervening against bullying, which offered alternatives to the traditional method of apportioning blame and punishing bullies. Similarly, AB3 provided a worksheet on possible responses to bullying. FS provided educational magazines on bullying issues. BB provided many materials, such as individual student workbooks, a review poster, master copies of resources for all activities, and homework worksheets.

Discussion

The aim of this systematic review was to provide a reasoned synthesis of whole-school interventions in secondary school capable of improving the school environment by assigning an active role to students. The first result that warrants consideration regards the number of publications that met our eligibility criteria to select whole-school interventions based on activities soliciting ASP in secondary schools. Despite the

wide interest of researchers on the topic of whole-school interventions in general (see Bonell et al., 2018; Charlton et al., 2021), our selection and data collection process eventually provided only 22 reports referring to 16 studies that fostered ASP during the intervention. This result calls for further work in the field. Based on the emphasis given by educational and political agendas about the importance of empowering students in their role as active participants in schools, first of all, and in societies, subsequently, research should not overlook the question of how to improve their participatory skills by involving them in school activities and decisions (Markham & Aveyard, 2003). More investment in this direction is needed to evaluate the consistency and efficacy of the existing programs, to eventually reach consensus on the intervention protocols that schools can implement to improve their learning environment. Results related to each of our specific aims will be discussed in the following paragraphs.

Characteristics of the Selected Programs

As for the first aim of the review, concerning the description of the identified literature, several reflections arise from our results. Considering the year of publication, we found growing interest by researchers in the field, as most reports were published in the last few years, i.e., from 2018 to 2021. This may be considered positive indication that research has identified student participation in school interventions as a crucial topic on which to invest for future works. As for the focus of the selected literature, most of the included studies concerned the reduction of violent behaviors, referring for the most part to bullying, while the promotion of a more general positive emotional and relational school climate is the less investigated topic. Notwithstanding the overall need to fill in this limitation of research, these results suggest that future studies should address the issue of how it is possible to create better school environments for students starting from their own involvement and decision-making roles. This is consistent with the direction indicated by Bonell et al. (2018), who upheld the importance of focusing more on overall school systems rather than on specific problems. The implementation of a larger number of programs fostering ASP in order to improve school climate and learning environments would thus be important to understand how to support students in dealing with the variety of non-specific problems that can arise during school life. Indeed, as confirmed by the literature, a positive school climate is related to higher academic achievement (Berkowitz et al., 2017; Kutsyuruba et al., 2015) and fewer problematic behaviors, violence (Reaves et al., 2018), and psychological malaise at school (Aldridge and McChesney, 2018). Finally, looking at the country of the selected program implementation, most of the studies were conducted in the USA, some in Australia and the UK, and a few in India and China. To our knowledge, with the exception of the two anti-bullying programs carried out in the UK and included in the current review, no other studies were conducted in European countries. With caution, as in many other countries researchers may have developed programs that could not be included in this review due to the inclusion criteria, we consider this as a gap

in the literature that future work should fill, especially considering that school policies and organizations are very different between continents. In this regard, it would be interesting both to replicate existing programs and to develop revisited or new interventions specifically adapted to the context of the country's school system, a work that would also fulfil the aim to increase the ecological validity of the proposed activities.

Methodological Quality of the Selected Reports

The second aim of the review was to assess the soundness of the research design and methodologies adopted in the selected studies. In this regard, we found that the considered reports were robust overall, as they met most of the considered indicators of methodological quality. In particular, most of the studies, based both on EGC or on other designs, described and contextualized the intervention and provided adequate analyses. Beyond the generally good methodological quality of the included studies, consistently with previous examinations of intervention programs (Charlton et al., 2021), we found a weakness concerning the fidelity of implementation, as this indicator was observed in only about half of the considered programs. Given that fidelity is a fundamental aspect for the evaluation of the intervention efficacy (O'Donnell, 2008), future studies should consider this important factor, by adding it to the evaluation of the programs for providing adequate monitoring tools that include qualitative and process indicators. Overall, however, the literature on the interventions meeting the criteria for our review, albeit limited, relies on methodologically sound grounds that allow us to draw some conclusions on programs and activities actively involving students and to offer suggestions for researchers and practitioners in the field.

Program Activities and Levels of ASP

As for the third and last aim of the review, i.e., concerning the analysis and description of ASP activities proposed in the various programs, our results offer material for an innovative way to look at the programs and points the way to future research in the field. In particular, some points should be highlighted. First, we were able to show that a variety of ASP activities can be used in interventions, from those requiring students to directly act on school programs and policies to those in which students are merely involved as recipients of contents delivered by school staff. From the careful and independently conducted analysis of all program activities, we were also able to grade such activities on a scale ranging from very high to very low levels of ASP. This may be a useful tool for researchers, as it advances a way to develop and organize interventions fostering different levels of ASP activities, to be selected on the basis of the research focus and aims. The effort to identify different levels of ASP also has the merit of introducing some degree of clarity and order in the great variability of program activities. While the importance of student involvement and participation was generally recognized in the literature (Baeten

et al., 2016; Schweisfurth, 2015), our in-depth description shows that not all forms of participation are equal, and thus offers a tool to differentiate between them. This advances our understanding of the concept of student participation both on a theoretical and methodological level.

Beyond this general picture of ASP activities, our findings show that the interventions based on the highest levels of ASP are those aimed at generally improving the school environment, i.e., the Restorative Justice and SEHER programs. These programs included all but one of the activities defined as *Very High ASP* or *High ASP*, while all other programs usually provided only one or two of them. This result can offer interesting insights if taken together with the above-reported considerations on the importance to promote overall school improvement, and not to restrict the focus on one or few specific problems. On the basis of this result, we tentatively advance that when the study scope is broad and the theoretical approach is systemic, interventions are more directly centered on lending a voice to students and assigning to them a decision-making role. This again supports the importance of promoting whole-school interventions targeted toward the general learning environment.

Limitations and Conclusion

We are aware that the findings of the present literature review should be considered in the light of certain limitations. First of all, our choice to include only studies published in peer-reviewed journals in English requires some caution. While this selection criteria allowed us to provide a picture of the international literature, this might entail the loss of programs published in other languages that nonetheless contribute to the issue and deserve to be explored in future reviews. Secondly, in the present work, we did not address the issue of cross-cultural similarities and differences in schooling and education, which may influence the way ASP is conceived and valorized in the school context. However, the levels of ASP activities we proposed have the strength of resulting from the analysis of programs from several countries and may thus offer a basis for future discussions on the cross-cultural validity of practices fostering ASP. Furthermore, the present review has focused only on secondary school programs. While this choice was needed for guaranteeing clear references and boundaries to our findings, it also leaves to be explored whether our proposed classification of ASP activities could also be applied to younger students. Given the developmental and organizational differences between primary and secondary levels of education, this issue certainly merits further exploration in future reviews.

As the aim of our review was to provide an in-depth and reasoned description of existing studies based on ASP and of the activities adopted to promote the active role of students, testing the efficacy of these studies was beyond the scope of the present work. While future research may advance this line of inquiry, based on the evidence that different outcomes are considered in such a small number of studies, it seems premature to move toward extensive efficacy testing such as meta-analyses. Rather, at present, it is probably more feasible and desirable to have an

increasing amount of literature focusing on ASP in whole-school interventions, to collect further evidence of robust programs and activities, especially with regard to high ASP. As a possible further research question in this direction, we suggest it would also be useful to assess whether the ways of actively involving students may change depending on the intervention target outcomes or on the number of students taking part in the activities. Lastly, while this is true for any review of the literature, it should nonetheless be acknowledged that our syntheses and reflections are dependent upon the choices made in the article selection process. For example, our inclusion and exclusion criteria (i.e., focusing on general participants and targets of intervention) may have restricted our sample. With this in mind, we followed closely the PRISMA guidelines and detailed each step of the process, so that readers can be well informed and future research may build as seamlessly as possible from our work.

Despite the mentioned limitations, this review provides a literature advance in its in-depth examination of existing whole-school interventions that include active student participation in secondary school. Their description and reasoned synthesis make available to researchers and practitioners an overview of specific programs and activities that are being used to actively involve students in processes of change. This in turn can inform reflections and experimentations as to how to integrate and improve the existing provision. In this direction, the major effort and contribution of the present review is the proposal of an organizing structure based on different levels of ASP for analyzing interventions, which allows to classify the specific activities included in each program. Such an effort provides a common ground for reflections and future studies on active student participation, as a shared classification can be instrumental for planning new interventions or evaluating the actual degree of students' active involvement in the implemented programs. Overall, this work significantly contributes to the far-reaching goal of encouraging student participation in school life, and more specifically in the transformation of their learning environment, so that they can be empowered in shaping it to be increasingly responsive to their insights, ideas, and needs.

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Declarations

Conflict of Interest The authors declare no competing interests.

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