

## Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

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<b>eTable 1. PRISMA Checklist</b>			
<b>Section/topic</b>	<b>#</b>	<b>Checklist item</b>	<b>Reported on page #</b>
<b>TITLE</b>			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	Yes, reported on page 1
<b>ABSTRACT</b>			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	Yes, reported on pages 5-6
<b>INTRODUCTION</b>			
Rationale	3	Describe the rationale for the review in the context of what is already known.	Yes, reported on page 8
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	Yes, reported on page 8
<b>METHODS</b>			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	There is no review protocol
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language,	Yes, reported on page 9 and eMethods

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		publication status) used as criteria for eligibility, giving rationale.	
<b>Information sources</b>	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	Yes, reported on page 9
<b>Search</b>	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	Yes, reported on page 9 and eMethods
<b>Study selection</b>	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	Yes, reported on page 9 and eMethods
<b>Data collection process</b>	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	Yes, reported on page 9 and eMethods
<b>Data items</b>	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	Yes, reported on page 10 and eTable 2
<b>Risk of bias in individual studies</b>	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	Yes, reported on page 11 and eTable 3
<b>Summary measures</b>	13	State the principal summary measures (e.g., risk ratio, difference in means).	Yes, reported on pages 11-12
<b>Synthesis of results</b>	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., $I^2$ ) for each meta-analysis.	Yes, reported on pages 11-12 and Table 1

## **eMethods. Supplemental Methods**

### **Search strategies: sets of search terms used**

To detect randomized controlled trials (RCTs) of anti-bullying interventions, we first performed a computerized Ovid MEDLINE®, ERIC®, and PsycINFO® database search from inception through February 2020. We used three sets of search terms: 1) ["bullying" OR "peer abuse" OR "abuse" OR "aggression" OR "harassment" OR "perpetrator" OR "victim" OR "victimization" OR "peer violence" OR "violence" OR "cyberbullying" OR "anti-bullying"], 2) AND ["school" OR "peer"], and 3) AND ["intervention" OR "curriculum" OR "prevention" OR "program" OR "resilience" OR "school climate" OR "school-based" OR "therapy" OR "treatment" OR "trial"].

### **Study selection**

Four of us (three psychiatric consultants and one clinical psychologist (MA, MDC, IEB, and RAC) double-screened all papers in three phases, resolving discrepancies through discussion and consensus (including another researcher, a psychiatric consultant, DF).

In phase 1, we screened the titles and abstracts of the retrieved papers. Papers were selected only if, based on title and abstract, they met all of the following inclusion criteria: 1) assessment of bullying at school; 2) assessment of efficacy or effectiveness of an anti-bullying program (to reduce bullying rates or bullying complications); 3) randomized controlled trial design; 4) reporting of results; and 5) published in English. However, if in doubt or if there was insufficient information in the title or abstract, they were selected. The initial literature search yielded 34,798 studies. The manual search identified six additional records. After removing 18,091 duplicates, we evaluated 16,707 potential studies. Of the 16,707 studies, 371 fulfilled all the inclusion criteria and qualified for phase 2.

Phase 2 consisted of a comprehensive review of the full text of the articles. Studies were selected if they met all the following inclusion criteria: 1) they were original studies or letters with original data (editorials, letters without original data, reviews, and meta-analyses were excluded); 2) they were randomized controlled trials; 3) they assessed the efficacy/effectiveness of an anti-bullying intervention (i.e., either the effect of an intervention targeting school and/or individual variables (e.g., school climate, coping skills, etc.) on bullying rates, or the effect of an anti-bullying program or protocol on bullying rates and/or mental health problems); 4) the intervention was performed at school; and 5) they reported results that would allow calculation of effect sizes. Of the 371 studies, 77 qualified for phase 3.

In phase 3, we used the following hierarchical criteria to control for studies with overlapping samples to ensure that only independent samples assessing each outcome category were included in each of the meta-analyses: 1) study with the largest sample and 2) most recent publication. When data from at least three independent studies assessing the effect on the same outcome category were available, we selected the outcome,

and consequently the studies, for meta-analysis. Of the 77 studies, 69 original independent studies met the criteria for inclusion in the final meta-analysis database.

#### **Data extraction**

Six of us (DF, CMDC, MA, MDC, IEB, and RAC) extracted data from each eligible study independently and double-checked them by pairs, with discrepancies resolved via discussion. Data extracted included: year of publication, region (country and city if available) where the study was conducted, name of the intervention program, date of intervention, duration of intervention, duration of follow-up (when applicable), type of randomization (individual or cluster), type of control group, type of school (public or private), primary (age  $\leq 11$ ) versus secondary (age 12-18) education, sample size, number of randomized groups, mean age, age range, and percentage of females (for both intervention and control groups), type of approach (universal or targeted), type of bullying variable (dichotomous or continuous), and statistics to calculate effect sizes for the meta-analyses and meta-regressions.

#### **Classification of outcome variables**

The 69 original independent studies used more than 500 different instruments to assess outcome variables. Three of us (IEB, RAC, and DF) independently classified these instruments into a manageable number of outcome variables, with discrepancies resolved by discussion. This allowed us to consolidate outcome variables into eight categories based on previous meta-analyses: 1) overall bullying (as a pooled measure, including bullying perpetration, bullying exposure, and cyberbullying); 2) traditional bullying perpetration; 3) traditional bullying exposure; 4) cyberbullying (including both perpetration and exposure); 5) attitudes that discourage bullying; 6) attitudes that encourage bullying; 7) mental health problems; and 8) school climate.

Traditional bullying perpetration was defined as “to engage in bullying” (including teasing, rumors, deliberate exclusion/social isolation, and physical threats/violence). Traditional bullying exposure was defined as “being the object of bullying” (including teasing, rumors, deliberate exclusion/social isolation, and physical threats/violence). Cyberbullying was defined as a pooled measure including both cyberbullying perpetration and exposure and was considered a specific form of bullying that involves the use of electronic devices and social media, such as computers, tablets, or mobile telephones to carry out bullying. Attitudes that discourage bullying were defined as social or group positions and beliefs that reject or condemn bullying. Attitudes that encourage bullying were defined as social or group positions and beliefs that promote, favor, tolerate, accept, or excuse bullying. Mental health problems were defined as mental symptoms (e.g., depression, anxiety, or insomnia), suicidality (e.g., suicide ideation, suicide attempt), or loss of wellbeing. School climate was defined as the quality and character of school life, including social characteristics of a school in terms of relationships among students and staff/teachers, learning and teaching emphasis, values and norms, and shared approaches and practices.

### **Potential moderators of effect size estimates for significant meta-analyses**

Study quality, duration of follow-up (interval between end of intervention and assessment, when applicable), year of publication, mean age (>10 years: age cut-off based on a previous meta-analysis),<sup>1</sup> percentage of female participants, sample size of intervention groups, sample size (>1000 participants: cut-off based on previous data),<sup>2</sup> number of randomized intervention groups, duration of intervention (interval from start to end of intervention), duration of follow-up ( $\geq 1$  year), and universal or targeted intervention.

### **Statistical analysis**

We entered data into an electronic database and analyzed it using random-effects meta-analyses with Comprehensive Meta-Analysis (CMA) Software Version 2.0 (Biostat, Inc., Englewood, NJ).<sup>3</sup> Cohen's *d* values were used as estimates of the effect size of each anti-bullying intervention relative to control groups.

We included as outcomes the mean overall differences in change between intervention and control groups. If the score change value was not available for a certain scale or test, we used endpoint and follow-up differences between intervention and control conditions. If a particular study provided data for different specific outcome measures that may be in the same outcome category, these results were pooled to calculate a single summary effect size for each outcome category in each particular sample at each time point. Pooled 95% confidence intervals (CI) were calculated. The magnitude of Cohen's *d* can be interpreted as small (0.2 to 0.5), moderate (0.5 to 0.8), or large (>0.8).<sup>4</sup>

For purposes of this work, positive Cohen's *d* values show that a certain variable increases more in the active intervention group than in the control group during the assessed period, while negative values indicate the opposite. When the pre-post correlation value was not available and could not be calculated, we used an imputed default *r* value of 0.5.<sup>5</sup> Although the bias is notably small for every pre-post correlation imputation strategy scenario,<sup>6</sup> we decided to use an imputation of  $r=0.5$ , since this is a conservative approach.

Based on the known heterogeneity of outcome measures, we expected that the estimates would vary substantially between studies, and we ran random effects models. In the random-effects analysis, each study was weighted by the inverse of its variance and the between-studies variance.<sup>7</sup> In order to explore if particular studies influenced the random weighted mean, we performed an 'influence analysis' to examine the effect of each individual study on the overall estimate by excluding one study at a time.<sup>8</sup>

We assessed statistical heterogeneity through visual inspection of forest plots and using the *Q* statistic (a magnitude of heterogeneity) and the *I*<sup>2</sup> statistic (a measure of the proportion of variance in summary effect size attributable to heterogeneity).<sup>9</sup> *I*<sup>2</sup> values less than 30% were considered an insignificant amount of heterogeneity.<sup>10</sup> We assessed publication bias by visually inspecting funnel plots and using Orwin's fail-safe *N*,<sup>11</sup> with a criterion for a 'trivial' standardized difference in means of 0.1 and a mean standardized difference in means in missing studies of 0. This generated the number of unpublished studies required to move estimates to a non-significant threshold. Furthermore, we used Egger's linear regression method to quantify the bias captured by the funnel plot.<sup>12</sup>

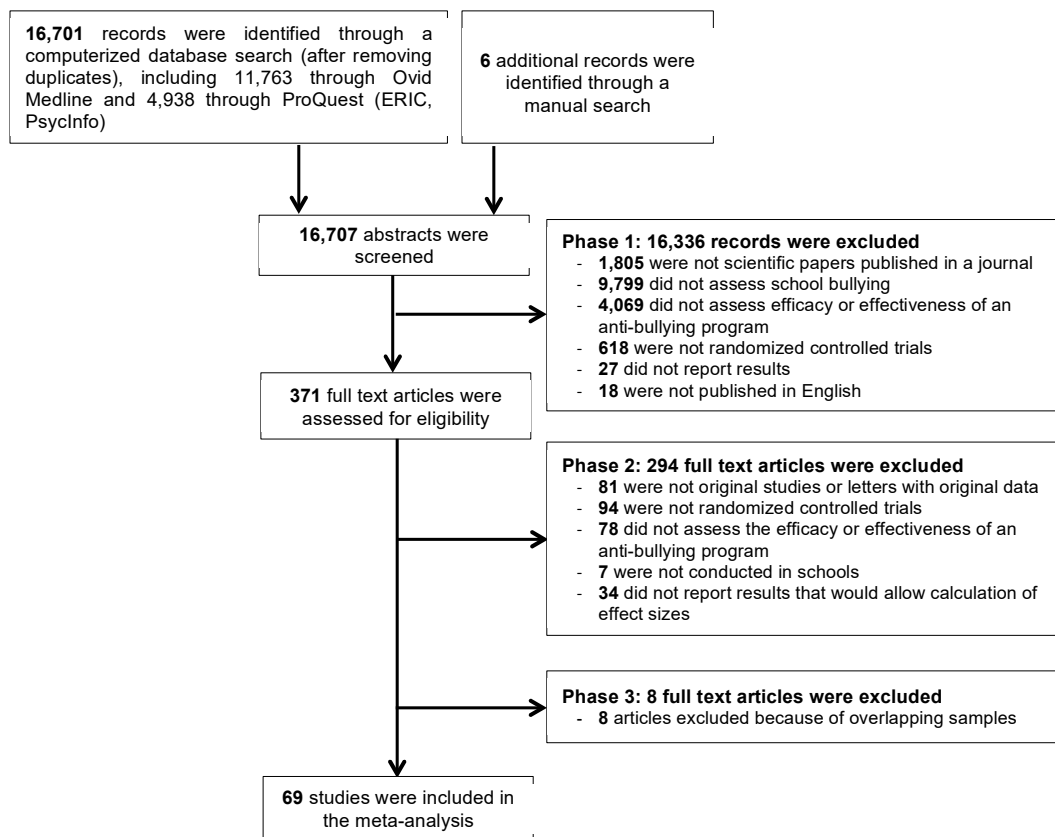
We used meta-regressions with a random effect model with unrestricted maximum likelihood to test effects of potential moderators on effect size estimates (difference between intervention and control groups) for significant meta-analyses. We performed meta-regressions for moderator variables if at least four studies assessing the same predictor and outcome variable were available. Significant meta-regression values were confirmed by excluding one study at a time, and only meta-regressions for which p-values remained significant after this process were considered significant.

Since recent meta-analyses of the efficacy of anti-bullying interventions have reported a significant moderating effect of geographic location,<sup>13</sup> we performed a meta-analytic subgroup analysis by region, classifying studies into three groups: studies conducted in North America (including Canada and the US), in Europe (including European countries and Israel), and in other regions, instead of just including this variable as a potential moderator in the meta-regressions. We conducted additional subgroup meta-analyses of universal and targeted interventions.

Cohen's d values were converted into number needed to treat (NNT) as recommended by Furukawa's method.<sup>14</sup> NNT was used to obtain the population impact number (PIN) of universal (targeting all students, regardless of risk) anti-bullying interventions, as an estimated measure of the impact of the intervention in the population. PIN is defined as “children in the total population for whom one event will be prevented by the intervention”<sup>15</sup> or, simply, how many need to participate in an anti-bullying program to prevent one case of bullying.<sup>16</sup>

We used a false discovery rate (FDR) correction for multiple comparisons (<https://brainder.org/2011/09/05/fdr-corrected-fdr-adjusted-p-values/>). This function computes the FDR threshold for a vector of p-values. The percentage of tolerated false positives was 5% ( $q < 0.05$ ).

**eFigure 1.** PRISMA flow diagram of the systematic literature search strategy





<b>eTable 2. Classification of outcome variables</b>		
<b>STUDY (first author, year)</b>	<b>Name of outcome variable</b>	<b>Outcome group</b>
Athanasiades, <sup>17</sup> 2015	Tabby checklist-Estimate of cybervictimisation in the next 6 months	Cyberbullying
Athanasiades, <sup>17</sup> 2015	Tabby checklist-Involvement in cybervictimisation in past 6 months	Cyberbullying
Baldry, <sup>18</sup> 2004	Sum of different types of bullying	Bullying perpetration
Baldry, <sup>18</sup> 2004	Sum of different types of victimization	Bullying exposure
Barkoukis, <sup>65</sup> 2016	Basic Empathy Scale total	Attitudes that discourage bullying
Barkoukis, <sup>65</sup> 2016	Basic Empathy Scale cognitive	Attitudes that discourage bullying
Barkoukis, <sup>65</sup> 2016	Basic Empathy Scale affective	Attitudes that discourage bullying
Barkoukis, <sup>65</sup> 2016	Prototype facets (positive)	Attitudes that discourage bullying
Bonell, <sup>19</sup> 2018	Gatehouse Bullying Scale overall score	Bullying exposure
Bonell, <sup>19</sup> 2018	Gatehouse Bullying Scale teasing	Bullying exposure
Bonell, <sup>19</sup> 2018	Gatehouse Bullying Scale rumours	Bullying exposure
Bonell, <sup>19</sup> 2018	Gatehouse Bullying Scale deliberate exclusion	Bullying exposure
Bonell, <sup>19</sup> 2018	Gatehouse Bullying Scale threatened or hurt	Bullying exposure
Bonell, <sup>19</sup> 2018	Edinburgh study youth transitions and crime overall score	Bullying perpetration
Bonell, <sup>19</sup> 2018	PedsQL overall score	Mental health problems
Bonell, <sup>19</sup> 2018	PedsQL Physical health	Mental health problems
Bonell, <sup>19</sup> 2018	PedsQL Psychosocial health	Mental health problems
Bonell, <sup>19</sup> 2018	PedsQL Emotional functioning	Mental health problems
Bonell, <sup>19</sup> 2018	PedsQL Social functioning	Mental health problems
Bonell, <sup>19</sup> 2018	PedsQL School functioning	Mental health problems
Bonell, <sup>19</sup> 2018	SDQ total difficulties score	Mental health problems
Bonell, <sup>19</sup> 2018	SDQ Emotional problems	Mental health problems
Bonell, <sup>19</sup> 2018	SDQ Conduct problems	Mental health problems
Bonell, <sup>19</sup> 2018	SDQ Hyperactivity	Mental health problems
Bonell, <sup>19</sup> 2018	SDQ Peer problems	Mental health problems
Bonell, <sup>19</sup> 2018	SDQ Pro-social strengths	Mental health problems
Bonell, <sup>19</sup> 2018	Short Warwick-Edinburgh Mental Well-Being Scale Total wellbeing index	Mental health problems

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Bonell, <sup>19</sup> 2018	Modified aggression scale bullying perpetration	Bullying perpetration
Bonell, <sup>66</sup> 2019	Student view of school climate overall	School climate
Bonell, <sup>66</sup> 2019	Student view of school climate Student perception of supportive teacher relationships subscale	School climate
Bonell, <sup>66</sup> 2019	Student view of school climate Student sense of belonging	School climate
Bonell, <sup>66</sup> 2019	Student view of school climate Student perception of participative school environment subscale	School climate
Bonell, <sup>66</sup> 2019	Student view of school climate Student commitment to academic values subscale	School climate
Boulton, <sup>20</sup> 1996	Tendency to bully others	Bullying perpetration
Boulton, <sup>20</sup> 1996	Attitudes towards bullying	Attitudes that discourage bullying
Boulton, <sup>59</sup> 2017	Self-blame	Mental health problems
Boulton, <sup>59</sup> 2017	Self-esteem	Mental health problems
Bowes, <sup>21</sup> 2019	Global School Based Health measure of bullying	Bullying exposure
Bowes, <sup>21</sup> 2019	Forms of Bullying Scale (Total victimization)	Bullying exposure
Bowes, <sup>21</sup> 2019	Forms of Bullying Scale Verbal victimization	Bullying exposure
Bowes, <sup>21</sup> 2019	Forms of Bullying Scale Threats – victimization	Bullying exposure
Bowes, <sup>21</sup> 2019	Forms of Bullying Scale Physical – victimization	Bullying exposure
Bowes, <sup>21</sup> 2019	Forms of Bullying Scale Relational – victimization	Bullying exposure
Bowes, <sup>21</sup> 2019	Forms of Bullying Scale Social - victimization	Bullying exposure
Bowes, <sup>21</sup> 2019	Forms of Bullying Scale (Total perpetration)	Bullying perpetration
Bowes, <sup>21</sup> 2019	Forms of Bullying Scale Verbal perpetration	Bullying perpetration
Bowes, <sup>21</sup> 2019	Forms of Bullying Scale Threats – perpetration	Bullying perpetration
Bowes, <sup>21</sup> 2019	Forms of Bullying Scale Physical – perpetration	Bullying perpetration
Bowes, <sup>21</sup> 2019	Forms of Bullying Scale Relational – perpetration	Bullying perpetration
Bowes, <sup>21</sup> 2019	Forms of Bullying Scale Social – perpetration	Bullying perpetration
Bowes, <sup>21</sup> 2019	School climate (total)	School climate
Brown, <sup>22</sup> 2011	School environment survey school antibullying policies and strategies	Attitudes that discourage bullying
Brown, <sup>22</sup> 2011	School environment survey- school bullying intervention	Attitudes that discourage bullying
Brown, <sup>22</sup> 2011	School environment survey- staff bullying intervention	Attitudes that discourage bullying
Brown, <sup>22</sup> 2011	School environment survey-student climate	School climate
Brown, <sup>22</sup> 2011	School environment survey-staff climate	School climate
Brown, <sup>22</sup> 2011	Teacher. Social competency	School climate
Brown, <sup>22</sup> 2011	Teacher. Physical bullying perpetration	Bullying perpetration
Brown, <sup>22</sup> 2011	Teacher. Nonphysical bullying perpetration	Bullying perpetration
Brown, <sup>22</sup> 2011	Student. Student support	School climate

Brown, <sup>22</sup> 2011	Student. Student attitudes against bullying	Attitudes that discourage bullying
Brown, <sup>22</sup> 2011	Student. Student attitudes toward bullying intervention	Attitudes that discourage bullying
Brown, <sup>22</sup> 2011	Student. Teacher/Staff bullying prevention	Attitudes that discourage bullying
Brown, <sup>22</sup> 2011	Student. Student bullying intervention	Attitudes that discourage bullying
Brown, <sup>22</sup> 2011	Student. Teacher/staff bullying intervention	Attitudes that discourage bullying
Brown, <sup>22</sup> 2011	Student. Positive bystander behavior	School climate
Brown, <sup>22</sup> 2011	Student. Bullying perpetration	Bullying perpetration
Brown, <sup>22</sup> 2011	Student. Bullying victimization	Bullying exposure
Brown, <sup>22</sup> 2011	Student. Student climate	School climate
Brown, <sup>22</sup> 2011	Student. School connectedness	School climate
Brown, <sup>22</sup> 2011	Student. Staff climate	School climate
Calvete, <sup>67</sup> 2019	Bullying perpetration	Bullying perpetration
Calvete, <sup>67</sup> 2019	Bullying victimization	Bullying exposure
Cappella, <sup>68</sup> 2012	Victimization	Bullying exposure
Chen, <sup>69</sup> 2017	RBIQ Antibullying training vs control	Attitudes that discourage bullying
Chen, <sup>69</sup> 2017	RBIQ Definition only vs control	Attitudes that discourage bullying
Chen, <sup>69</sup> 2017	RBIQ Definition and a checklist of three characteristics vs control	Attitudes that discourage bullying
Connolly, <sup>23</sup> 2015	Knowledge bullying	Bullying perpetration
Connolly, <sup>23</sup> 2015	Attitudes pro-bullying	Attitudes that encourage bullying
Connolly, <sup>23</sup> 2015	Victimization bullying	Bullying exposure
Connolly, <sup>23</sup> 2015	School connectedness	School climate
Connolly, <sup>23</sup> 2015	Anxiety	Mental health problems
CPPRG, <sup>24</sup> 2010	Aggressive behavior	Bullying perpetration
CPPRG, <sup>24</sup> 2010	Hyperactive-disruptive behavior	Mental health problems
Crean, <sup>25</sup> 2013	Aggression teacher-report	Bullying perpetration
Crean, <sup>25</sup> 2013	Aggression self-report	Bullying perpetration
Crean, <sup>25</sup> 2013	Victimization at school	Bullying exposure
Cross, <sup>70</sup> 2011	Bullied every few weeks vs. Less often/Not	Bullying perpetration
Cross, <sup>70</sup> 2011	Bullied vs. Not at all	Bullying perpetration
Cross, <sup>70</sup> 2011	Bullied others every few weeks vs. Less often/Not	Bullying perpetration
Cross, <sup>70</sup> 2011	Bullied others vs. Not at all	Bullying perpetration
Cross, <sup>70</sup> 2011	Told no one if bullied vs. Told someone/ wasn't bullied	Attitudes that discourage bullying
Cross, <sup>70</sup> 2011	Saw someone being bullied/didn't see	Bullying perpetration

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Cross, <sup>26</sup> 2016	Cybervictimization	Cyberbullying
Cross, <sup>26</sup> 2016	Cyberperpetration	Cyberbullying
DeRosier, <sup>27</sup> 2004	Treatment Peer-Report linking	School climate
DeRosier, <sup>27</sup> 2004	Peer-Report dislinking	School climate
DeRosier, <sup>27</sup> 2004	Peer-Report aggression	Attitudes that encourage bullying
DeRosier, <sup>27</sup> 2004	Peer-Report victimization	Bullying exposure
DeRosier, <sup>27</sup> 2004	Self-Report self-efficacy	Attitudes that discourage bullying
DeRosier, <sup>27</sup> 2004	Self-Report outcome expectancy	Attitudes that discourage bullying
DeRosier, <sup>27</sup> 2004	Self-Report social anxiety	Mental health problems
DeRosier, <sup>27</sup> 2004	Self-Report depression	Mental health problems
DeRosier, <sup>27</sup> 2004	Self-Report peer rejection	Mental health problems
DeRosier, <sup>27</sup> 2004	Self-Report bullying	Bullying perpetration
DeRosier, <sup>27</sup> 2004	Self-Report antisocial affiliates	Attitudes that encourage bullying
DeRosier, <sup>27</sup> 2004	Self-Report victimization	Bullying exposure
DeRosier, <sup>27</sup> 2004	Self-Report social withdrawal	School climate
DeRosier, <sup>27</sup> 2004	Self-Report leadership	Attitudes that discourage bullying
DeRosier, <sup>71</sup> 2005	Treatment Peer-Report linking	School climate
DeRosier, <sup>71</sup> 2005	Peer-Report dislinking	School climate
DeRosier, <sup>71</sup> 2005	Peer-Report aggression	Attitudes that encourage bullying
DeRosier, <sup>71</sup> 2005	Peer-Report victimization	Bullying exposure
DeRosier, <sup>71</sup> 2005	Self-Report self-esteem	Attitudes that discourage bullying
DeRosier, <sup>71</sup> 2005	Self-Report self-efficacy	Attitudes that discourage bullying
DeRosier, <sup>71</sup> 2005	Self-Report outcome expectancy	Attitudes that discourage bullying
DeRosier, <sup>71</sup> 2005	Self-Report social anxiety	Mental health problems
DeRosier, <sup>71</sup> 2005	Self-Report depression	Mental health problems
DeRosier, <sup>71</sup> 2005	Self-Report peer rejection	Attitudes that encourage bullying
DeRosier, <sup>71</sup> 2005	Self-Report bullying	Bullying perpetration
DeRosier, <sup>71</sup> 2005	Self-Report antisocial affiliates	Attitudes that encourage bullying
DeRosier, <sup>71</sup> 2005	Self-Report victimization	Bullying exposure
DeRosier, <sup>71</sup> 2005	Self-Report social withdrawal	School climate
DeRosier, <sup>71</sup> 2005	Self-Report leadership	Attitudes that discourage bullying
DeSmet, <sup>72</sup> 2018	Attitudes on comforting the victim	Attitudes that discourage bullying
DeSmet, <sup>72</sup> 2018	Attitudes on giving the victim advice	Attitudes that discourage bullying

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DeSmet, <sup>72</sup> 2018	Attitudes on reporting to adults	Attitudes that discourage bullying
DeSmet, <sup>72</sup> 2018	Attitudes on telling the bully it is not cool	Attitudes that discourage bullying
DeSmet, <sup>72</sup> 2018	Attitudes on getting back at the bully	Attitudes that discourage bullying
DeSmet, <sup>72</sup> 2018	Attitudes on doing nothing	Attitudes that encourage bullying
DeSmet, <sup>72</sup> 2018	Moral disengagement attitudes	Mental health problems
DeSmet, <sup>72</sup> 2018	Outcome expectations	Mental health problems
DeSmet, <sup>72</sup> 2018	Low self-efficacy	Mental health problems
DeSmet, <sup>72</sup> 2018	High self-efficacy	Mental health problems
DeSmet, <sup>72</sup> 2018	Subjective norm for positive bystander behavior	Attitudes that discourage bullying
DeSmet, <sup>72</sup> 2018	Inappropriate social skills	Mental health problems
DeSmet, <sup>72</sup> 2018	Appropriate social skills	Mental health problems
DeSmet, <sup>72</sup> 2018	Empathic skills	Mental health problems
DeSmet, <sup>72</sup> 2018	Behavioral intention positive bystanding	Attitudes that discourage bullying
DeSmet, <sup>72</sup> 2018	Behavioral intention negative bystanding	Attitudes that encourage bullying
DeSmet, <sup>72</sup> 2018	Positive bystander behavior	Attitudes that discourage bullying
DeSmet, <sup>72</sup> 2018	Negative bystander behavior	Attitudes that encourage bullying
DeSmet, <sup>72</sup> 2018	Offline bullying victimization	Bullying exposure
DeSmet, <sup>72</sup> 2018	Offline bullying perpetration	Bullying perpetration
DeSmet, <sup>72</sup> 2018	Cyberbullying victimization	Cyberbullying
DeSmet, <sup>72</sup> 2018	Cyberbullying perpetration	Cyberbullying
DeSmet, <sup>72</sup> 2018	Cyberbullying witnessing	Cyberbullying
DeSmet, <sup>72</sup> 2018	Quality of live and well-being	Mental health problems
Espelage, <sup>28</sup> 2013	Verbal/relational bully perpetration	Bullying perpetration
Espelage, <sup>28</sup> 2013	Peer victimization	Bullying exposure
Espelage, <sup>28</sup> 2013	Physical aggression	Bullying perpetration
Espelage, <sup>29</sup> 2015	Bully perpetration	Bullying perpetration
Espelage, <sup>29</sup> 2015	Bully victimization	Bullying exposure
Espelage, <sup>29</sup> 2015	Physical aggression	Bullying perpetration
Espelage, <sup>60</sup> 2016	School belonging	School climate
Espelage, <sup>60</sup> 2016	Empathy	Mental health problems
Espelage, <sup>60</sup> 2016	Caring	Mental health problems
Espelage, <sup>60</sup> 2016	Willingness to intervene	Attitudes that discourage bullying
Farmer, <sup>30</sup> 2017	Shouted at playtime	Bullying exposure

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Farmer, <sup>30</sup> 2017	Excluded at playtime	Bullying exposure
Farmer, <sup>30</sup> 2017	Physical bullying	Bullying perpetration
Farmer, <sup>30</sup> 2017	Child has happy relations	Attitudes that discourage bullying
Farmer, <sup>30</sup> 2017	Child has been bullied	Bullying perpetration
Farmer, <sup>30</sup> 2017	Parents: child has been bothered/upset by bullying	Mental health problems
Farmer, <sup>30</sup> 2017	Teachers: how often does physical bullying occur?	Bullying perpetration
Farmer, <sup>30</sup> 2017	Teachers: how often does name-calling occur?	Bullying exposure
Farmer, <sup>30</sup> 2017	Teachers: how often does deliberate exclusion occur?	Bullying exposure
Farmer, <sup>30</sup> 2017	Teachers: how often does cruel teasing occur?	Bullying exposure
Farmer, <sup>30</sup> 2017	Teachers: have you personally noticed bullying occurring in the classroom?	Bullying perpetration
Farmer, <sup>30</sup> 2017	Teachers: have you personally noticed bullying occurring at recess or lunch?	Bullying perpetration
Farmer, <sup>30</sup> 2017	Teachers: the school is a safe place	School climate
Farmer, <sup>30</sup> 2017	Teachers: how often do students tell you they have been bullied at school?	Attitudes that discourage bullying
Fekkes, <sup>31</sup> 2006	Being bullied	Bullying exposure
Fekkes, <sup>31</sup> 2006	Active bullying	Bullying perpetration
Fekkes, <sup>31</sup> 2006	Depression	Mental health problems
Fekkes, <sup>31</sup> 2006	Psychosomatic complaints	Mental health problems
Fekkes, <sup>31</sup> 2006	Delinquent behavior	Attitudes that encourage bullying
Fekkes, <sup>31</sup> 2006	General satisfaction with school life	School climate
Fekkes, <sup>31</sup> 2006	Satisfaction with contact with other students	School climate
Fekkes, <sup>31</sup> 2006	Satisfaction with contact with teachers	School climate
Fonagy, <sup>32</sup> 2009	Peer-Report of aggression	Bullying perpetration
Fonagy, <sup>32</sup> 2009	Self-Report of aggression	Bullying perpetration
Fonagy, <sup>32</sup> 2009	Peer-Report of victimization	Bullying exposure
Fonagy, <sup>32</sup> 2009	Self-Report of victimization	Bullying exposure
Fonagy, <sup>32</sup> 2009	Aggressive bystanding	Attitudes that encourage bullying
Fonagy, <sup>32</sup> 2009	Helpful bystanding	Attitudes that discourage bullying
Fonagy, <sup>32</sup> 2009	Mentalizing	Attitudes that discourage bullying
Fonagy, <sup>32</sup> 2009	Aggression is legitimate	Attitudes that encourage bullying
Frey, <sup>33</sup> 2005	Student experience acceptance of bullying/aggression	Attitudes that encourage bullying
Frey, <sup>33</sup> 2005	Student experience bystander responsibility	Attitudes that discourage bullying
Frey, <sup>33</sup> 2005	Student experience perceived adult responsiveness	Attitudes that discourage bullying
Frey, <sup>33</sup> 2005	Student experience difficulty of responding assertively	Attitudes that encourage bullying

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Frey, <sup>33</sup> 2005	Student experience direct aggression	Bullying perpetration
Frey, <sup>33</sup> 2005	Student experience indirect aggression	Bullying perpetration
Frey, <sup>33</sup> 2005	Student experience victimization	Bullying exposure
Frey, <sup>33</sup> 2005	Observer behavior bullying	Bullying perpetration
Frey, <sup>33</sup> 2005	Observer behavior encourage bullying	Attitudes that encourage bullying
Frey, <sup>33</sup> 2005	Observer behavior target of bullying	Attitudes that encourage bullying
Frey, <sup>33</sup> 2005	Observer behavior nonbullying aggression	Attitudes that encourage bullying
Frey, <sup>33</sup> 2005	Observer behavior agreeable social	Attitudes that discourage bullying
Frey, <sup>33</sup> 2005	Observer behavior argumentative social	Attitudes that discourage bullying
Frey, <sup>33</sup> 2005	Teacher-rated interaction skills	Attitudes that discourage bullying
Giannotta, <sup>34</sup> 2009	Relational victimization	Bullying exposure
Giannotta, <sup>34</sup> 2009	Overt physical victimization	Bullying exposure
Gradinger, <sup>35</sup> 2015	Cyberbullying	Cyberbullying
Gradinger, <sup>35</sup> 2015	Cybervictimization	Cyberbullying
Green, <sup>36</sup> 2020	Bullying knowledge	Attitudes that discourage bullying
Green, <sup>36</sup> 2020	Assertiveness	Mental health problems
Green, <sup>36</sup> 2020	Adult responsiveness	Mental health problems
Green, <sup>36</sup> 2020	Bystander responsibility	Attitudes that discourage bullying
Green, <sup>36</sup> 2020	Acceptance of bullying	Attitudes that encourage bullying
Green, <sup>36</sup> 2020	Peer victimization	Bullying exposure
Green, <sup>36</sup> 2020	Bullying perpetration	Bullying perpetration
Green, <sup>36</sup> 2020	Fighting	Bullying perpetration
Gusmões, <sup>37</sup> 2018	Suffer bullying	Bullying exposure
Gusmões, <sup>37</sup> 2018	Practice bullying	Bullying perpetration
Gusmões, <sup>37</sup> 2018	Suffer physical violence	Bullying exposure
Gusmões, <sup>37</sup> 2018	Practice physical violence	Bullying perpetration
Holen, <sup>38</sup> 2013	Bullying	Bullying perpetration
Holen, <sup>38</sup> 2013	SIKS children self concept	Mental health problems
Holen, <sup>38</sup> 2013	SIKS children class climate	School climate
Holen, <sup>38</sup> 2013	SIKS children social integration	School climate
Hormazábal-Aguayo, <sup>39</sup> 2019	Bullying physical	Bullying perpetration
Hormazábal-Aguayo, <sup>39</sup> 2019	Bullying verbal	Bullying perpetration
Hormazábal-Aguayo, <sup>39</sup> 2019	Bullying social exclusion	Bullying perpetration

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Hunt, <sup>40</sup> 2007	Attitude to victim scale	Attitudes that discourage bullying
Hunt, <sup>40</sup> 2007	Attitude to bullying scale	Attitudes that discourage bullying
Hunt, <sup>40</sup> 2007	Prevalence of bullying	Bullying perpetration
Hunt, <sup>40</sup> 2007	Experience of being bullied	Bullying exposure
Hunt, <sup>40</sup> 2007	Perceived school safety	School climate
Hunt, <sup>40</sup> 2007	Likelihood of telling somebody	Attitudes that discourage bullying
Hunt, <sup>40</sup> 2007	Ability to stop others bullying	Attitudes that discourage bullying
Hunt, <sup>40</sup> 2007	Attempts to stop others bullying	Attitudes that discourage bullying
Hunt, <sup>40</sup> 2007	Ability to join in bullying	Attitudes that encourage bullying
Hunt, <sup>40</sup> 2007	Bullying others with group	Attitudes that encourage bullying
Hunt, <sup>40</sup> 2007	Bullying others alone	Attitudes that encourage bullying
Jenson, <sup>73</sup> 2013	From bully to uninvolved	Bullying perpetration
Jenson, <sup>73</sup> 2013	From bully-victim to uninvolved	Bullying perpetration
Jenson, <sup>73</sup> 2013	From uninvolved to uninvolved	Bullying perpetration
Ju, <sup>41</sup> 2009	Victimization way to school	Bullying exposure
Ju, <sup>41</sup> 2009	Victimization way from school	Bullying exposure
Kaljee, <sup>42</sup> 2017	Teachers actions to stop bullying	Attitudes that discourage bullying
Kaljee, <sup>42</sup> 2017	Being bullied (physical)	Bullying exposure
Kaljee, <sup>42</sup> 2017	Being bullied (emotional)	Bullying exposure
Kaljee, <sup>42</sup> 2017	Bullying others (physical)	Bullying perpetration
Kaljee, <sup>42</sup> 2017	Bullying others (emotional)	Bullying perpetration
Karasimopoulou, <sup>74</sup> 2012	Social acceptance (bullying)	Attitudes that encourage bullying
Kärnä, <sup>43</sup> 2011	Self-Reported victimization	Bullying exposure
Kärnä, <sup>43</sup> 2011	Self-Reported bullying	Bullying perpetration
Kärnä, <sup>43</sup> 2011	Peer-Reported victimization	Bullying exposure
Kärnä, <sup>43</sup> 2011	Peer-Reported bullying	Bullying perpetration
Kärnä, <sup>43</sup> 2011	Peer-Reported assisting	Attitudes that encourage bullying
Kärnä, <sup>43</sup> 2011	Peer-Reported reinforcing	Attitudes that encourage bullying
Kärnä, <sup>43</sup> 2011	Peer-Reported defending	Attitudes that discourage bullying
Kärnä, <sup>43</sup> 2011	Antibullying attitudes	Attitudes that discourage bullying
Kärnä, <sup>43</sup> 2011	Empathy towards victims	Attitudes that discourage bullying
Kärnä, <sup>43</sup> 2011	Self-efficacy for defending	Attitudes that discourage bullying
Kärnä, <sup>43</sup> 2011	Well-being at school	Mental health problems

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Kärnä, <sup>44</sup> 2013	Self report victimization	Bullying exposure
Kärnä, <sup>44</sup> 2013	Self report bullying	Bullying perpetration
Kärnä, <sup>44</sup> 2013	Peer report victimization	Bullying exposure
Kärnä, <sup>44</sup> 2013	Peer report bullying	Bullying perpetration
Kärnä, <sup>44</sup> 2013	Peer report assisting	Attitudes that encourage bullying
Kärnä, <sup>44</sup> 2013	Peer report reinforcing	Attitudes that encourage bullying
Kärnä, <sup>44</sup> 2013	Peer report defending	Attitudes that discourage bullying
Kathard, <sup>75</sup> 2014	SROM - Attitudes toward children who stutter	Attitudes that encourage bullying
Knowler, <sup>45</sup> 2013	Victimization rating	Bullying exposure
Knowler, <sup>45</sup> 2013	Trait emotional intelligence	Attitudes that discourage bullying
Knowler, <sup>45</sup> 2013	Adjustment SDQ total difficulties	Mental health problems
Knowler, <sup>45</sup> 2013	Adjustment SDQ pro-social behavior	Attitudes that discourage bullying
Mallick, <sup>61</sup> 2018	SROM Total	Mental health problems
Mallick, <sup>61</sup> 2018	SROM PSD	Mental health problems
Mallick, <sup>61</sup> 2018	SROM SP	Mental health problems
Mallick, <sup>61</sup> 2018	SROM VI	Mental health problems
Meraviglia, <sup>46</sup> 2003	Knowledge of bullying students	Bullying perpetration
Meraviglia, <sup>46</sup> 2003	Knowledge of bullying Staff members	Bullying perpetration
Meyer, <sup>76</sup> 2000	Peer report School treatment-control	Bullying perpetration
Midthassel, <sup>47</sup> 2008	Bullying frequency	Bullying perpetration
Midthassel, <sup>47</sup> 2008	Victimization frequency	Bullying exposure
Moore, <sup>62</sup> 2018	SDQ Total difficulties	Mental health problems
Moore, <sup>62</sup> 2018	CYRM Total resilience	Mental health problems
Moore, <sup>62</sup> 2018	SEQ-C Total self-efficacy	Mental health problems
Muñoz-Fernández, <sup>77</sup> 2019	Moderate physical aggression	Bullying perpetration
Muñoz-Fernández, <sup>77</sup> 2019	Moderate physical victimization	Bullying exposure
Muñoz-Fernández, <sup>77</sup> 2019	Severe physical aggression	Bullying perpetration
Muñoz-Fernández, <sup>77</sup> 2019	Severe physical victimization	Bullying exposure
Muñoz-Fernández, <sup>77</sup> 2019	Sexual aggression	Bullying perpetration
Muñoz-Fernández, <sup>77</sup> 2019	Sexual victimization	Bullying exposure
Muñoz-Fernández, <sup>77</sup> 2019	Bullying aggression	Bullying perpetration
Muñoz-Fernández, <sup>77</sup> 2019	Bullying victimization	Bullying exposure
Naidoo, <sup>78</sup> 2016	Knowledge of verbal bullying	Attitudes that discourage bullying

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Naidoo, <sup>78</sup> 2016	Cues about verbal bullying	Attitudes that discourage bullying
Naidoo, <sup>78</sup> 2016	Attitudes against verbal bullying	Attitudes that discourage bullying
Naidoo, <sup>78</sup> 2016	Attitudes preventing verbal bullying	Attitudes that discourage bullying
Naidoo, <sup>78</sup> 2016	Social norms preventing verbal bullying	Attitudes that discourage bullying
Naidoo, <sup>78</sup> 2016	Social support preventing verbal bullying behavior	Attitudes that discourage bullying
Naidoo, <sup>78</sup> 2016	Modeling behavior preventing verbal bullying	Attitudes that discourage bullying
Naidoo, <sup>78</sup> 2016	Regular self-efficacy preventing verbal bullying	Attitudes that discourage bullying
Naidoo, <sup>78</sup> 2016	Situational self- efficacy preventing verbal bullying	Attitudes that discourage bullying
Naidoo, <sup>78</sup> 2016	Intentions to not verbally bully	Attitudes that discourage bullying
Naidoo, <sup>78</sup> 2016	Having an action plan against verbal bullying	Attitudes that discourage bullying
Naidoo, <sup>78</sup> 2016	Having an action skill against verbal bullying	Attitudes that discourage bullying
Naidoo, <sup>78</sup> 2016	Having an action goal against verbal bullying	Attitudes that discourage bullying
Naidoo, <sup>78</sup> 2016	Experienced verbal bullying in the past month	Bullying exposure
Naidoo, <sup>78</sup> 2016	Verbally bullied people in the past month	Bullying perpetration
Nieh, <sup>79</sup> 2018	Game only bullying knowledge	Attitudes that discourage bullying
Nieh, <sup>79</sup> 2018	Game only bullying attitude	Attitudes that discourage bullying
Nieh, <sup>79</sup> 2018	Game only empathy	Mental health problems
Nieh, <sup>79</sup> 2018	Game only intention to defend	Attitudes that discourage bullying
Nieh, <sup>79</sup> 2018	Game only teachers bullying attitude	Attitudes that discourage bullying
Nieh, <sup>79</sup> 2018	Game + debriefing bullying knowledge	Attitudes that discourage bullying
Nieh, <sup>79</sup> 2018	Game + debriefing bullying attitude	Attitudes that discourage bullying
Nieh, <sup>79</sup> 2018	Game + debriefing empathy	Mental health problems
Nieh, <sup>79</sup> 2018	Game + debriefing intention to defend	Attitudes that discourage bullying
Nieh, <sup>79</sup> 2018	Game + debriefing teachers bullying attitude	Attitudes that discourage bullying
Nocentini, <sup>48</sup> 2016	Victimization	Bullying exposure
Nocentini, <sup>48</sup> 2016	Bullying	Bullying perpetration
Nocentini, <sup>48</sup> 2016	Pro-bullying	Attitudes that encourage bullying
Nocentini, <sup>48</sup> 2016	Pro-victim	Attitudes that discourage bullying
Nocentini, <sup>48</sup> 2016	Empathy toward the victim	Attitudes that discourage bullying
Nocentini, <sup>49</sup> 2018	Bullying	Bullying perpetration
Nocentini, <sup>49</sup> 2018	Victimization	Bullying exposure
Nocentini, <sup>49</sup> 2018	Internalizing symptoms	Mental health problems
Nocentini, <sup>49</sup> 2018	Externalizing symptoms	Mental health problems

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Ostrov, <sup>50</sup> 2015	Physical bullying	Bullying perpetration
Ostrov, <sup>50</sup> 2015	Relational bullying	Bullying perpetration
Ostrov, <sup>50</sup> 2015	Physical victimization	Bullying exposure
Ostrov, <sup>50</sup> 2015	Relational victimization	Bullying exposure
Pfetsch, <sup>80</sup> 2018	Individual anti-cyberbullying norm	Attitudes that discourage bullying
Pfetsch, <sup>80</sup> 2018	Classroom anti-cyberbullying norm	Attitudes that discourage bullying
Sanchez, <sup>51</sup> 2001	Bullying school or on the bus	Bullying perpetration
Santos, <sup>52</sup> 2011	Physical aggression. Students	Bullying perpetration
Santos, <sup>52</sup> 2011	Physical aggression. Teachers	Bullying perpetration
Santos, <sup>52</sup> 2011	Indirect aggression. Students	Bullying perpetration
Santos, <sup>52</sup> 2011	Indirect aggression. Teachers	Bullying perpetration
Santos, <sup>52</sup> 2011	Prosocial Behaviour. Students	Bullying perpetration
Santos, <sup>52</sup> 2011	Prosocial Behaviour. Teachers	Attitudes that discourage bullying
Schechtman, <sup>63</sup> 2009	Aggressive. Internalizing	Attitudes that discourage bullying
Schechtman, <sup>63</sup> 2009	Aggressive. Externalizing	Mental health problems
Schechtman, <sup>63</sup> 2009	Aggressive Class relations	Mental health problems
Schechtman, <sup>63</sup> 2009	Non-Aggressive Child aggression. Total	Attitudes that encourage bullying
Schechtman, <sup>63</sup> 2009	Non-Aggressive Class aggression. Total	Attitudes that encourage bullying
Schechtman, <sup>63</sup> 2009	Non-Aggressive Class relations	Attitudes that encourage bullying
Shams, <sup>81</sup> 2018	Bullying behavior	Bullying perpetration
Sorrentino, <sup>53</sup> 2018	Tabby Improved checklist-Cyberbullying	Cyberbullying
Sorrentino, <sup>53</sup> 2018	Tabby Improved checklist-Cybervictimization	Cyberbullying
Stelko-Pereira, <sup>82</sup> 2015	Students-victimization by students	Bullying exposure
Stelko-Pereira, <sup>82</sup> 2015	Students-perpetration of violence to students	Bullying perpetration
Stelko-Pereira, <sup>82</sup> 2015	Students-victimization by staff	Bullying exposure
Stelko-Pereira, <sup>82</sup> 2015	Students-school engagement	School climate
Stelko-Pereira, <sup>82</sup> 2015	Teachers-mental health problems	Mental health problems
Stelko-Pereira, <sup>82</sup> 2015	Teachers-perception of student victimization by students	Bullying exposure
Stevens, <sup>83</sup> 2000	Self-efficacy factor	Attitudes that discourage bullying
Stevens, <sup>83</sup> 2000	Intention factor	Attitudes that discourage bullying
Stevens, <sup>83</sup> 2000	Behaviour factor	Attitudes that discourage bullying
Stevens, <sup>83</sup> 2000	Behaviour factor. Reacting against bullies	Attitudes that discourage bullying
Stevens, <sup>83</sup> 2000	Behaviour factor. Supporting victims of bullying	Attitudes that discourage bullying

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Stevens, <sup>83</sup> 2000	Behaviour factor. Seeking teacher's help	Attitudes that discourage bullying
Swaim, <sup>84</sup> 2008	Self-efficacy	Attitudes that discourage bullying
Swaim, <sup>84</sup> 2008	Violent intentions	Attitudes that discourage bullying
Swaim, <sup>84</sup> 2008	Verbal assault	Attitudes that encourage bullying
Swaim, <sup>84</sup> 2008	Physical assault against objects	Attitudes that encourage bullying
Swaim, <sup>84</sup> 2008	Physical assault against people	Attitudes that encourage bullying
Swaim, <sup>84</sup> 2008	Verbal victimization	Attitudes that encourage bullying
Swaim, <sup>84</sup> 2008	Physical victimization	Bullying exposure
Swaim, <sup>84</sup> 2008	Perceived safety	Bullying exposure
Swaim, <sup>84</sup> 2008	Self-efficacy	School climate
Swaim, <sup>84</sup> 2008	Violent intentions	Attitudes that discourage bullying
Swaim, <sup>84</sup> 2008	Verbal assault	Attitudes that encourage bullying
Swaim, <sup>84</sup> 2008	Physical assault against objects	Attitudes that encourage bullying
Swaim, <sup>84</sup> 2008	Physical assault against people	Attitudes that encourage bullying
Swaim, <sup>84</sup> 2008	Verbal victimization	Attitudes that encourage bullying
Swaim, <sup>84</sup> 2008	Physical victimization	Bullying exposure
Swaim, <sup>84</sup> 2008	Perceived safety	Bullying exposure
Tanrikulu, <sup>54</sup> 2015	Cyberbullying	Cyberbullying
Trip, <sup>55</sup> 2015	Bullying victimization ViSC-REBE	Bullying exposure
Trip, <sup>55</sup> 2015	Bullying perpetration ViSC-REBE	Bullying exposure
Trip, <sup>55</sup> 2015	Bullying victimization ViSC-REBE	Bullying perpetration
Trip, <sup>55</sup> 2015	Bullying perpetration ViSC-REBE	Bullying exposure
Tsiantis, <sup>56</sup> 2013	Students victims	Bullying exposure
Tsiantis, <sup>56</sup> 2013	Students bullies	Bullying perpetration
Tsiantis, <sup>56</sup> 2013	Students bullies and victims	Bullying perpetration
Tsiantis, <sup>56</sup> 2013	Bullying	Bullying perpetration
Tsiantis, <sup>56</sup> 2013	Victimization for bullying	Bullying exposure
van den Berg, <sup>57</sup> 2012	Best friend	Bullying exposure
van den Berg, <sup>57</sup> 2012	Acceptance	Attitudes that discourage bullying
van den Berg, <sup>57</sup> 2012	Rejection	Attitudes that discourage bullying
van den Berg, <sup>57</sup> 2012	Popularity	Attitudes that encourage bullying
van den Berg, <sup>57</sup> 2012	Unpopularity	School climate
van den Berg, <sup>57</sup> 2012	Desired peer affiliation	School climate

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van den Berg, <sup>57</sup> 2012	Relational aggression	School climate
van den Berg, <sup>57</sup> 2012	Physical aggression	Bullying perpetration
van den Berg, <sup>57</sup> 2012	Victimization	Bullying perpetration
van den Berg, <sup>57</sup> 2012	Withdrawn behavior	Bullying exposure
van den Berg, <sup>57</sup> 2012	Prosocial behavior	Bullying exposure
Wójcik, <sup>85</sup> 2018	Total bullying index of individual bullying behavior	Bullying perpetration
Yan, <sup>58</sup> 2019	School life satisfaction	School climate
Yan, <sup>58</sup> 2019	Fear of negative evaluation	Mental health problems
Yan, <sup>58</sup> 2019	Social avoidance and distress	Mental health problems
Yan, <sup>58</sup> 2019	Social anxiety	Mental health problems
Yan, <sup>58</sup> 2019	Self-stem	Mental health problems
Yan, <sup>58</sup> 2019	Bullying victimization	Bullying exposure
Yeager, <sup>64</sup> 2012	Intervention vs Coping Skills Aggression behavior	Bullying perpetration
Yeager, <sup>64</sup> 2012	Intervention vs No treatment Aggression behavior	Bullying perpetration
Yeager, <sup>64</sup> 2012	Intervention vs Coping Skills Depressive symptoms victims	Mental health problems
Yeager, <sup>64</sup> 2012	Intervention vs No treatment Depressive symptoms victims	Mental health problems
Yeager, <sup>64</sup> 2012	Intervention vs Coping Skills Depressive symptoms non victims	Mental health problems
Yeager, <sup>64</sup> 2012	Intervention vs No treatment Depressive symptoms non victims	Mental health problems
Yeager, <sup>64</sup> 2012	Intervention vs Coping Skills Teacher nominations reductions conduct problems victims	Bullying perpetration
Yeager, <sup>64</sup> 2012	Intervention vs No treatment Teacher nominations reductions conduct problems victims	Bullying perpetration
Yeager, <sup>64</sup> 2012	Intervention vs Coping Skills Teacher nominations reductions conduct problems non victims	Bullying perpetration
Yeager, <sup>64</sup> 2012	Intervention vs No treatment Teacher nominations reductions conduct problems non victims	Bullying perpetration
<b>Abbreviations:</b> CPPRG, Conduct Problems Prevention Research Group; CYRM: Child and Youth Resilience Measure; PedsQL: Paediatric Quality of Life Inventory; RBIQ: Bullying Incidents Questionnaire; SDQ: Strengths and Difficulties Questionnaire; SEQ-C: Self-Efficacy Questionnaire for Children; SIKS: Social Integration, Classroom Climate and Self-concept of School Readiness; SROM: Stuttering Resource Outcome Measure; SROM-PSD: Stuttering Resource Outcome Measure-Positive Social Distance; SROM-SP: Stuttering Resource Outcome Measure-Social Pressure; SROM-VI: Stuttering Resource Outcome Measure-Verbal Interaction; ViSC-REBE: Viennese Social Competence- Rational Emotive Behavioral Education.		

**Table 3. Quality assessment**

STUDY (first author, year)	1.- Selection bias: Random sequence generation	2.- Performance bias	3.- Detection bias	4.- Attrition bias	5.- Reporting bias	6.- Other bias	TOTAL
Athanasiaides, <sup>17</sup> 2015	1	0	1	0	1	1	4
Baldry, <sup>18</sup> 2004	1	1	1	2	2	1	8
Barkoukis, <sup>65</sup> 2016	1	0	1	1	2	2	7
Bonell, <sup>19</sup> 2018	2	1	2	2	2	1	10
Bonell, <sup>66</sup> 2019	2	1	1	1	2	1	8
Boulton, <sup>20</sup> 1996	1	0	0	1	2	2	6
Boulton, <sup>59</sup> 2017	1	0	1	2	2	2	8
Bowes, <sup>21</sup> 2019	1	0	0	0	2	2	5
Brown, <sup>22</sup> 2011	2	0	2	2	2	2	10
Calvete, <sup>67</sup> 2019	2	2	1	2	2	2	11
Cappella, <sup>68</sup> 2012	2	0	2	2	2	1	9
Chen, <sup>69</sup> 2017	2	1	1	2	2	2	10
Connolly, <sup>23</sup> 2015	2	2	0	2	2	1	9
CPPRG, <sup>24</sup> 2010	1	0	0	2	2	1	6
Crean, <sup>25</sup> 2013	2	0	1	2	2	1	8
Cross, <sup>70</sup> 2011	2	1	1	2	1	1	8
Cross, <sup>26</sup> 2016	1	0	1	2	1	2	7
DeRosier, <sup>27</sup> 2004	2	0	1	1	2	1	7
DeRosier, <sup>71</sup> 2005	2	0	1	0	2	1	6
DeSmet, <sup>72</sup> 2018	2	2	0	2	2	2	10
Espelage, <sup>28</sup> 2013	2	0	2	2	2	1	9
Espelage, <sup>29</sup> 2015	2	0	0	1	2	1	6
Espelage, <sup>60</sup> 2016	2	0	0	1	2	1	6
Farmer, <sup>30</sup> 2017	2	0	0	2	1	1	6
Fekkes, <sup>31</sup> 2006	1	0	1	1	1	2	6
Fonagy, <sup>32</sup> 2009	2	0	0	2	2	1	7
Frey, <sup>33</sup> 2005	1	0	1	1	2	1	6
Giannotta, <sup>34</sup> 2009	1	0	1	2	2	2	8

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<b>Gradinger,<sup>35</sup> 2015</b>	1	0	1	2	2	1	7
<b>Green,<sup>36</sup> 2020</b>	2	1	0	2	2	1	8
<b>Gusmões,<sup>37</sup> 2018</b>	1	0	1	2	1	1	6
<b>Holen,<sup>38</sup> 2013</b>	2	1	0	2	2	2	9
<b>Hormazábal-Aguayo,<sup>39</sup> 2019</b>	2	0	0	2	2	1	7
<b>Hunt,<sup>40</sup> 2007</b>	1	0	1	1	2	1	6
<b>Jenson,<sup>73</sup> 2013</b>	2	1	1	2	1	2	9
<b>Ju,<sup>41</sup> 2009</b>	2	0	1	2	2	1	8
<b>Kaljee,<sup>42</sup> 2017</b>	1	1	1	1	2	2	8
<b>Karasimopoulou,<sup>74</sup> 2012</b>	1	0	1	0	2	1	5
<b>Kärnä,<sup>43</sup> 2011</b>	1	0	1	1	2	1	6
<b>Kärnä,<sup>44</sup> 2013</b>	2	0	1	2	1	1	7
<b>Kathard,<sup>75</sup> 2014</b>	1	0	2	1	2	1	7
<b>Knowler,<sup>45</sup> 2013</b>	1	0	1	1	2	0	5
<b>Mallick,<sup>61</sup> 2018</b>	2	2	2	0	1	1	8
<b>Meraviglia,<sup>46</sup> 2003</b>	1	0	0	1	2	1	5
<b>Meyer,<sup>76</sup> 2000</b>	1	2	1	2	2	1	9
<b>Midthassel,<sup>47</sup> 2008</b>	2	0	1	0	2	0	5
<b>Moore,<sup>62</sup> 2018</b>	2	1	1	2	0	2	8
<b>Muñoz-Fernández,<sup>77</sup> 2019</b>	2	1	1	2	2	2	10
<b>Naidoo,<sup>78</sup> 2016</b>	1	0	1	1	2	1	6
<b>Nieh,<sup>79</sup> 2018</b>	2	2	1	2	1	1	9
<b>Nocentini,<sup>48</sup> 2016</b>	1	0	2	2	0	1	6
<b>Nocentini,<sup>49</sup> 2018</b>	2	0	1	1	2	1	7
<b>Ostrov,<sup>50</sup> 2015</b>	2	2	1	2	2	0	9
<b>Pfetsch,<sup>80</sup> 2018</b>	2	0	0	1	1	1	5
<b>Sanchez,<sup>51</sup> 2001</b>	1	0	0	2	1	1	5
<b>Santos,<sup>52</sup> 2011</b>	2	0	0	1	1	1	5
<b>Schechtman,<sup>63</sup> 2009</b>	1	0	0	1	1	1	4
<b>Shams,<sup>81</sup> 2018</b>	2	1	1	2	2	1	9
<b>Sorrentino,<sup>53</sup> 2018</b>	2	0	1	2	2	1	8
<b>Stelko-Pereira,<sup>82</sup> 2015</b>	2	1	1	2	1	2	9
<b>Stevens,<sup>83</sup> 2000</b>	1	0	1	1	2	0	5

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<b>Swaim,<sup>84</sup> 2008</b>	1	0	2	0	2	2	<b>7</b>
<b>Tanrikulu,<sup>54</sup> 2015</b>	2	1	1	2	0	0	<b>6</b>
<b>Trip,<sup>55</sup> 2015</b>	1	0	1	2	1	2	<b>7</b>
<b>Tsiantis,<sup>56</sup> 2013</b>	2	1	1	2	0	0	<b>6</b>
<b>van den Berg,<sup>57</sup> 2012</b>	1	0	1	1	1	1	<b>5</b>
<b>Wójcik,<sup>85</sup> 2018</b>	1	0	1	1	2	1	<b>6</b>
<b>Yan,<sup>58</sup> 2019</b>	2	2	1	2	2	1	<b>10</b>
<b>Yeager,<sup>64</sup> 2012</b>	2	2	2	2	2	1	<b>11</b>
Categories were scored on a 0 to 2 scale (low risk of bias (2 points), unclear (1 point) or high risk of bias (0 points)), where higher values representing greater quality. Abbreviations: CPPRG, Conduct Problems Prevention Research Group.							



<b>eTable 4. Characteristics of the included studies (part 1)</b>								
<b>Study (first author, year of publication)</b>	<b>Name of program (intervention on traditional bullying or cyberbullying)</b>	<b>Region</b>	<b>Country</b>	<b>City or state</b>	<b>Date of intervention</b>	<b>Duration of intervention (w)</b>	<b>Mean duration of follow-up (w)</b>	<b>Type of randomization</b>
<b>Athanasiadis,<sup>17</sup> 2015</b>	Tabby Project	Europe	Greece	Greater Metropolitan Area of Thessaloniki	Apr to Oct 2012	24	No F/U	Individual
<b>Baldry,<sup>18</sup> 2004</b>	Bulli and Pupe (traditional bullying)	Europe	Italy	Rome	N/A	3	No F/U	Cluster
<b>Barkoukis,<sup>65</sup> 2016</b>	N/A (traditional bullying)	Europe	Greece	N/A	N/A	8	No F/U	Cluster
<b>Bonell,<sup>19</sup> 2018</b>	Learning Together	Europe	UK	Southeast England	2014 to 2017	144	No F/U	Cluster
<b>Bonell,<sup>66</sup> 2019</b>	Learning Together	Europe	UK	Southeast England	2014 to 2017	144	No F/U	Cluster
<b>Boulton,<sup>20</sup> 1996</b>	Sticks and Stones Video	N/A	N/A	N/A	N/A	1 day	No F/U	Cluster
<b>Boulton,<sup>59</sup> 2017</b>	CATS (traditional bullying)	Europe	UK	Chester	N/A	5	2	Individual
<b>Bowes,<sup>21</sup> 2019</b>	ROOTS Indonesia program	Asia	Indonesia	Central Java (Klaten and Semarang)	N/A	12	No F/U	Cluster
<b>Brown,<sup>22</sup> 2011</b>	Steps to Respect (traditional bullying)	North America	USA	California	N/A	36	No F/U	Cluster
<b>Calvete,<sup>67</sup> 2019</b>	Incremental theory of personality interventions (ITPI)	Europe	Spain	Bizkaia (Basque Country)	N/A	1 day	24	Individual
<b>Cappella,<sup>68</sup> 2012</b>	Teacher consultation and coaching (traditional bullying)	North America	USA	New York	Jan to Apr (year N/A)	16	8	Cluster
<b>Chen,<sup>69</sup> 2017</b>	N/A	Asia	China	Northern, central and southern Taiwan	N/A	1 day	No F/U	Individual
<b>Connolly,<sup>23</sup> 2015</b>	Respect in Schools Everywhere (RISE)	North America	Canada	Urban Canadian	Fall to winter (year N/A)	16	No F/U	Cluster
<b>CPPRG,<sup>24</sup> 2010</b>	PATHS, Fast Track	North America	USA	Nashville, Pennsylvania, Seattle	Sept to May (year N/A)	36	No F/U	Cluster
<b>Crean,<sup>25</sup> 2013</b>	PATHS (traditional bullying)	North America	USA	New York	Sept to Jun for 3 years (year N/A)	108	No F/U	Cluster

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<b>Cross,<sup>70</sup> 2011</b>	Friendly Schools Intervention	Other	Australia	Perth	Apr 2000 to Nov 2002	104	52-104	Cluster
<b>Cross,<sup>26</sup> 2016</b>	Cyber Friendly Schools (cyberbullying)	Other	Australia	Perth	2010 to 2011	78	52	Cluster
<b>DeRosier,<sup>27</sup> 2004</b>	S.S.GRIN (Social Skills Group Intervention) (traditional bullying)	North America	USA	North Carolina	Jan to Apr (year N/A)	16	No F/U	Individual
<b>DeRosier,<sup>71</sup> 2005</b>	S.S.GRIN (Social Skills Group Intervention) (traditional bullying)	North America	USA	North Carolina	Jan to Apr (year N/A)	17	52	Individual
<b>DeSmet,<sup>72</sup> 2018</b>	Friendly Attac	Europe	Belgium	Flanders	N/A	N/A	4	Cluster
<b>Espelage,<sup>28</sup> 2013</b>	Second Step: Student Success Through Prevention (SS-SSTP) (traditional bullying)	North America	USA	Illinois and Kansas	Sept 2010 to May 2013	36	No F/U	Individual
<b>Espelage,<sup>29</sup> 2015</b>	Second Step: Student Success Through Prevention (SS-SSTP)	North America	USA	Midwestern United States	Fall 2010 to Spring 2013	36	No F/U	Individual
<b>Espelage,<sup>60</sup> 2016</b>	Second Step: Student Success Through Prevention (SS-SSTP)	North America	USA	Midwestern United States	Fall 2010 to Spring 2013	36	No F/U	Individual
<b>Farmer,<sup>30</sup> 2017</b>	School Playground Environment (traditional bullying)	Other	New Zealand	Otago and Auckland	2011 to 2013	52	52	Cluster
<b>Fekkes,<sup>31</sup> 2006</b>	N/A (traditional bullying)	Europe	Netherlands	N/A	Nov 1999 to May 2000	24	52	Cluster
<b>Fonagy,<sup>32</sup> 2009</b>	CAPSLE (traditional bullying)	Europe	UK	Medium-sized Midwestern city in the UK	N/A	72	52	Cluster
<b>Frey,<sup>33</sup> 2005</b>	Steps to Respect (traditional bullying)	North America	USA	Pacific Northwest	Nov 2000 to May 2001	14	No F/U	Cluster
<b>Giannotta,<sup>34</sup> 2009</b>	Expressive Writing (traditional bullying)	Europe	Italy	Urban area in Northern Italy	N/A	2	No F/U	Individual
<b>Gradinger,<sup>35</sup> 2015</b>	ViSC Social Competence Program	Europe	Austria	Vienna	Sept 2009 to Jun 2010	36	No F/U	Cluster
<b>Green,<sup>36</sup> 2020</b>	Boston vs Bullies	North America	USA	Boston, Massachusetts	2017 to 2018	4	No F/U	Cluster

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<b>Gusmões,<sup>37</sup> 2018</b>	#Tamojunto Prevention Program (traditional bullying)	Other	Brazil	Sau Paulo, Federal District, Sau Bernardo do Cambo, Florianopolis, Tubarao, Fortaleza	Feb 2014 to Nov 2014	36	52	Cluster
<b>Holen,<sup>38</sup> 2013</b>	Zippys Friends	Europe	Norway	Trondheim, Bodo, Osfold	2007 to 2008	24	No F/U	Cluster
<b>Hormazábal-Aguayo,<sup>39</sup> 2019</b>	Active-Start Intervention	South America	Chile	Santiago	Aug 2018 to Dec 2018	8	No F/U	Cluster
<b>Hunt,<sup>40</sup> 2007</b>	Antibullying program in Sydney (traditional bullying)	Other	Australia	Sydney	2001 to 2002	52	No F/U	Cluster
<b>Jenson,<sup>73</sup> 2013</b>	Youth Matters	North America	USA	Denver, Colorado	Fall to Spring (year N/A)	104	104	Cluster
<b>Ju,<sup>41</sup> 2009</b>	N/A	Asia	China	Jinan City, Shandong	Winter 2000	5	No F/U	Cluster
<b>Kaljee,<sup>42</sup> 2017</b>	Teachers Diploma Program (traditional bullying)	Other	Zambia	N/A	2013 to 2014	60	No F/U	Cluster
<b>Karasimopoulou,<sup>74</sup> 2012</b>	Skills for elementary school children (traditional bullying)	Europe	Greece	N/A	N/A	23	No F/U	Cluster
<b>Kärnä,<sup>43</sup> 2011</b>	KiVa (traditional bullying)	Europe	Finland	Finland	2007 to 2008	39	No F/U	Cluster
<b>Kärnä,<sup>44</sup> 2013</b>	KiVa (traditional bullying)	Europe	Finland	Finland	May 2008 to May 2009	36	No F/U	Cluster
<b>Kathard,<sup>75</sup> 2014</b>	Classroom Communication Resource (traditional bullying)	Other	South Africa	Cape Town	N/A	1	24	Cluster
<b>Knowler,<sup>45</sup> 2013</b>	Emotional literacy (EL) intervention (traditional bullying)	Europe	UK	London	N/A	12	No F/U	Individual
<b>Mallick,<sup>61</sup> 2018</b>	Classroom Communication Resource	Other	South Africa	Cape Town	Feb 2017 to Aug 2017	1 day	No F/U	Cluster
<b>Meraviglia,<sup>46</sup> 2003</b>	Expect Respect Project (traditional bullying)	North America	USA	Texas	Fall 1998 to Spring 1999	36	No F/U	Cluster
<b>Meyer,<sup>76</sup> 2000</b>	N/A	Other	South Africa	Stellenbosch Suburb (Western Cape)	N/A	12	N/A	Individual
<b>Midthassel,<sup>47</sup> 2008</b>	ZERO Program	Europe	Norway	Norway	2004 to 2006	104	No F/U	Cluster

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<b>Moore,<sup>62</sup> 2018</b>	Art Martials	Other	Australia	New South Wales	N/A	10	No F/U	Cluster
<b>Muñoz-Fernández,<sup>77</sup> 2019</b>	Dat-e Adolescence	Europe	Spain	Seville and Cordoba (Andalusia region)	Jan to Jun 2016	16	24	Cluster
<b>Naidoo,<sup>78</sup> 2016</b>	Integrated Model for Behavior Change (traditional bullying)	Other	South Africa	KwaZulu-Natal	Feb to Oct 2013	36	20	Cluster
<b>Nieh,<sup>79</sup> 2018</b>	Galaxy Rescuers game	Asia	China	Metro area in Northern Taiwan	Fall 2015	7	2	Cluster
<b>Nocentini,<sup>48</sup> 2016</b>	KiVa (traditional bullying)	Europe	Italy	Florence, Siena, Lucca	2013 to 2014	32	No F/U	Cluster
<b>Nocentini,<sup>49</sup> 2018</b>	KiVa (traditional bullying)	Europe	Italy	Tuscany	Sep 2013 to Jun 2014	36	No F/U	Cluster
<b>Ostrov,<sup>50</sup> 2015</b>	Early Childhood Friendship Project	North America	USA	Western New York	N/A	8	No F/U	Cluster
<b>Pfetsch,<sup>80</sup> 2018</b>	N/A	Europe	Germany	Germany	N/A	1 day	No F/U	Individual
<b>Sanchez,<sup>51</sup> 2001</b>	Bullyproof	North America	USA	Austin, Texas	Fall 1998 to Spring 1999	12	No F/U	Cluster
<b>Santos,<sup>52</sup> 2011</b>	Roots of Empathy (traditional bullying)	North America	Canada	Manitoba	2002 to 2003	36	104	Cluster
<b>Schechtman,<sup>63</sup> 2009</b>	Classroom and counselling intervention (traditional bullying)	Middle East	Israel	N/A	Dec to Mar (year N/A)	16	No F/U	Cluster
<b>Shams,<sup>81</sup> 2018</b>	Educational Intervention	Middle East	Iran	Gonabad City	Sept 2015 to May 2016	3 sessions	24	Cluster
<b>Sorrentino,<sup>53</sup> 2018</b>	Tabby Improved Prevention and Intervention Program (TIPIP)	Europe	Italy	Campania region, Southern Italy	Dec 2015 to Jun 2016	N/A	No F/U	Cluster
<b>Stelko-Pereira,<sup>82</sup> 2015</b>	Violencia Nota Zero	South America	Brazil	Mid-sized city in Sao Paulo State	N/A	12	36	Cluster
<b>Stevens,<sup>83</sup> 2000</b>	The Flemish school-based Antbullying intervention (traditional bullying)	Europe	Belgium	N/A	Oct 1995 to May 1996	32	52	Cluster
<b>Swaim,<sup>84</sup> 2008</b>	Resolve It, Solve It (traditional bullying)	North America	USA	Five states (KY, LA, IL, ID, CA)	N/A	N/A	78	Individual

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<b>Tanrikulu,<sup>54</sup> 2015</b>	Sensibility Development Program against Cyberbullying	Middle East	Turkey	Istanbul	May to Jun 2011	5	No F/U	Individual
<b>Trip,<sup>55</sup> 2015</b>	REBE-ViSC program (traditional bullying)	Europe	Romania	Oradea	Oct 2011 to Jun 2012	36	No F/U	Cluster
<b>Tsiantis,<sup>56</sup> 2013</b>	N/A	Europe	Greece	Attica, metropolitan area in Southern Greece	Nov 2011 to May 2012	11	No F/U	Cluster
<b>van den Berg,<sup>57</sup> 2012</b>	Classroom Arrangements (traditional bullying)	Europe	The Netherlands	The Netherlands	N/A	14	No F/U	Cluster
<b>Wójcik,<sup>85</sup> 2018</b>	ABBL program (traditional bullying)	Europe	Poland	Silesian Region	Sept to Nov (year N/A)	11	8	Cluster
<b>Yan,<sup>58</sup> 2019</b>	Left-behind Children (LBC)	Asia	China	Hunan, Henan, Liaoning, and Guangxi	Jun 2017 to Apr 2018	12	No F/U	Individual
<b>Yeager,<sup>64</sup> 2012</b>	Incremental theory of intelligence	North America	USA	San Francisco Bay Area	N/A	3	No F/U	Cluster
Abbreviations: N/A, not available; No F/U, No follow-up; w, weeks.								

eTable 5. Characteristics of the included studies (part 2)												
STUDY (first author, year of publication)	N individuals intervention groups	k intervention groups	N individuals control groups	k control groups	Mean age (intervention group), y	Age range (intervention), y	Mean age (control), y	Age range (control), y	% Female (intervention)	% Female (control)	Type of intervention (Universal or Targeted)	Primary or Secondary educations
Athanasziades, <sup>17</sup> 2015	123	N/A	140	N/A	N/A	13 to 14	N/A	13 to 14	50%	50%	Universal	Secondary
Baldry, <sup>18</sup> 2004	131	4	106	4	13.2	11 to 15	13.5	11 to 15	48%	54%	Universal	Both
Barkoukis, <sup>65</sup> 2016	212	2	143	2	14.7	13 to 17	15.7	13 to 17	54%	55%	Universal	Secondary
Bonell, <sup>19</sup> 2018	3320	20	3347	20	11.8	11 to 12	11.8	11 to 12	55%	50%	Universal	Primary
Bonell, <sup>66</sup> 2019	2044	20	2073	20	11.8	11 to 12	11.8	11 to 12	55%	50%	Universal	Primary
Boulton, <sup>20</sup> 1996	N/A	4	N/A	4	N/A	11 to 14	N/A	11 to 14	51.8%	51.8%	Universal	Secondary
Boulton, <sup>59</sup> 2017	21	N/A	20	N/A	14.5	N/A	14.5	N/A	52%	50%	Universal	Secondary
Bowes, <sup>21</sup> 2019	2654	4	2654	4	13.3	12 to 15	13.2	12 to 15	47%	50%	Universal	Secondary
Brown, <sup>22</sup> 2011	1485	64	1485	64	8.9	7 to 11	8.9	7 to 11	51%	48%	Universal	Primary
Calvete, <sup>67</sup> 2019	450	N/A	450	N/A	14.6	12 to 17	14.6	12 to 17	48%	48%	Universal	Secondary
Cappella, <sup>68</sup> 2012	169	18	178	18	8.0	N/A	8.0	N/A	43%	43%	Targeted	Primary
Chen, <sup>69</sup> 2017	140	1	142	1	38.7	N/A	38.7	N/A	39%	71%	Universal	Both
Connolly, <sup>23</sup> 2015	209	2 schools 15 class	300	2 schools 26 class	12.37	11 to 14	12.37	11 to 14	51%	51%	Universal	Secondary
CPPRG, <sup>24</sup> 2010	2937	190	2937	180	7	6 to 8	7	6 to 8	N/A	N/A	Universal	Primary
Crean, <sup>25</sup> 2013	422	7	357	7	N/A	8 to 12	N/A	8 to 12	57%	57%	Universal	Primary
Cross, <sup>70</sup> 2011	984	15	863	14	8.57	N/A	8.55	N/A	51%	48%	Universal	Primary
Cross, <sup>26</sup> 2016	1563	19	1246	16	12.9	12 to 14	12.9	12 to 14	53%	53%	Universal	Secondary

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<b>DeRosier,<sup>27</sup> 2004</b>	187	11	194	11	8.6	8 to 9	8.6	8 to 9	49%	49%	Targeted	Primary
<b>DeRosier,<sup>71</sup> 2005</b>	187	11	194	11	N/A	8 to 9	N/A	8 to 9	51%	51%	Targeted	Primary
<b>DeSmet,<sup>72</sup> 2018</b>	120	1	96	1	13.52	13 to 14	13.47	13 to 14	59%	65%	Universal	Secondary
<b>Espelage,<sup>28</sup> 2013</b>	1942	20	1678	20	13.3	11 to 12	13.3	11 to 12	49%	49%	Universal	Primary
<b>Espelage,<sup>29</sup> 2015</b>	47	N/A	76	N/A	12.5	12 to 13	12.5	12 to 13	38%	46%	Targeted	Secondary
<b>Espelage,<sup>60</sup> 2016</b>	47	N/A	76	N/A	12.5	12 to 13	12.5	12 to 13	38%	46%	Targeted	Secondary
<b>Farmer,<sup>30</sup> 2017</b>	391	8	369	8	8.0	6 to 9	7.9	6 to 9	47%	53%	Universal	Primary
<b>Fekkes,<sup>31</sup> 2006</b>	1196	14	1213	15	10.1	9 to 12	10.1	9 to 12	50%	50%	Universal	Primary
<b>Fonagy,<sup>32</sup> 2009</b>	356	3	221	3	8.0	N/A	8.0	N/A	N/A	N/A	Universal	Primary
<b>Frey,<sup>33</sup> 2005</b>	549	6	577	6	10.0	8 to 12	N/A	N/A	51%	48%	Universal	Primary
<b>Giannotta,<sup>34</sup> 2009</b>	76	4	79	4	12.2	N/A	N/A	N/A	52%	N/A	Universal	Secondary
<b>Gradinger,<sup>35</sup> 2015</b>	1192	13	447	5	11.7	10 to 15	11.6	10 to 15	49%	45%	Universal	Secondary
<b>Green,<sup>36</sup> 2020</b>	388	6 schools 19 classes	266	4 schools 15 classes	N/A	10 to 11	N/A	10 to 11	52%	51%	Universal	Primary
<b>Gusmões,<sup>37</sup> 2018</b>	2460	38	2547	34	13.0	11 to 15	13.0	11 to 15	50%	51%	Universal	Primary
<b>Holen,<sup>38</sup> 2013</b>	640	18 schools 47 classes	631	17 schools 44 classes	7.3	N/A	7.3	N/A	49%	49%	Universal	Primary
<b>Hormazábal-Aguayo,<sup>39</sup> 2019</b>	88	3	58	2	9.97	8 to 10	12.12	8 to 10	41%	51%	Universal	Primary
<b>Hunt,<sup>40</sup> 2007</b>	152	3	248	3	13.5	12 to 15	N/A	12 to 15	66%	66%	Universal	Secondary
<b>Jenson,<sup>73</sup> 2013</b>	395	14	392	14	9.82	N/A	9.82	N/A	52%	52%	Universal	Primary
<b>Ju,<sup>41</sup> 2009</b>	223	4	121	4	N/A	8 to 11	N/A	8 to 11	48%	42%	Universal	Primary
<b>Kaljee,<sup>42</sup> 2017</b>	1792	20	1792	20	11.0	9 to 13	10.6	8 to 13	58%	52%	Universal	Primary
<b>Karasimopoulou,<sup>74</sup> 2012</b>	128	12	158	12	11.0	10 to 12	N/A	10 to 12	54%	49%	Universal	Primary
<b>Kärnä,<sup>43</sup> 2011</b>	4201	39	3965	39	11.0	10 to 12	N/A	10 to 12	50%	50%	Universal	Both
<b>Kärnä,<sup>44</sup> 2013</b>	2230	40	2086	39	N/A	8 to 9	N/A	8 to 9	N/A	N/A	Universal	Primary
<b>Kathard,<sup>75</sup> 2014</b>	97	2	114	1	13.0	N/A	13.0	N/A	48%	48%	Targeted	Secondary
<b>Knowler,<sup>45</sup> 2013</b>	11	1	12	1	8.5	8 to 9	N/A	8 to 9	9%	9%	Targeted	Primary
<b>Mallick,<sup>61</sup> 2018</b>	223	5	231	5	13	N/A	13	N/A	57%	58%	Universal	Primary

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<b>Meraviglia,<sup>46</sup> 2003</b>	349	6	380	6	10.5	10 to 11	N/A	10 to 11	N/A	N/A	Universal	Primary
<b>Meyer,<sup>76</sup> 2000</b>	6	1	6	1	N/A	11 to 13	N/A	11 to 13	N/A	N/A	Targeted	Primary
<b>Midthassel,<sup>47</sup> 2008</b>	3441	22	5381	28	N/A	12 to 14	N/A	12 to 14	N/A	N/A	Universal	Both
<b>Moore,<sup>62</sup> 2018</b>	125	N/A	158	N/A	12.76	12 to 14	12.76	12 to 14	51%	51%	Universal	Secondary
<b>Muñoz-Fernández,<sup>77</sup> 2019</b>	557	4	866	3	14.88	11 to 19	15.04	11 to 19	54%	51%	Universal	Both
<b>Naidoo,<sup>78</sup> 2016</b>	191	8	243	8	16.9	N/A	16.5	N/A	48%	40%	Universal	Secondary
<b>Nieh,<sup>79</sup> 2018</b>	241	8	87	3	11.5	11 to 12	11.5	11 to 12	59%	40%	Universal	Primary
<b>Nocentini,<sup>48</sup> 2016</b>	1039	7	1003	7	10.9	N/A	N/A	N/A	49%	49%	Universal	Primary
<b>Nocentini,<sup>49</sup> 2018</b>	935	7 schools 51 classes	955	6 schools 46 classes	9.92	N/A	9.93	N/A	49%	49%	Universal	Secondary
<b>Ostrov,<sup>50</sup> 2015</b>	56	8	59	6	3.6	3 to 5	4	3 to 5	46%	44%	Universal	Primary
<b>Pfetsch,<sup>80</sup> 2018</b>	256	N/A	254	N/A	13.5	12 to 16	13.5	12 to 16	52%	52%	Universal	Secondary
<b>Sanchez,<sup>51</sup> 2001</b>	362	6	385	6	N/A	10 to 11	N/A	10 to 11	52%	48%	Universal	Primary
<b>Santos,<sup>52</sup> 2011</b>	445	24	315	12	8.5	4 to 13	8.5	4 to 13	N/A	N/A	Universal	Both
<b>Schechtman,<sup>63</sup> 2009</b>	60	13	51	13	12.5	11 to 14	12.5	11 to 14	50%	50%	Universal	Both
<b>Shams,<sup>81</sup> 2018</b>	147	2	90	2	13.73	12 to 16	13.73	12 to 16	64%	64%	Universal	Secondary
<b>Sorrentino,<sup>53</sup> 2018</b>	N/A	20	N/A	29	12.14	11 to 17	12.14	11 to 17	54%	54%	Universal	Secondary
<b>Stelko-Pereira,<sup>82</sup> 2015</b>	21	1	50	1	13	11 to 15	13	11 to 15	75%	49%	Targeted	Secondary
<b>Stevens,<sup>83</sup> 2000</b>	219	24	229	24	N/A	13 to 16	N/A	13 to 16	N/A	N/A	Universal	Both
<b>Swaim,<sup>84</sup> 2008</b>	712	3	780	3	13	12 to 14	13	12 to 14	57%	48%	Universal	Secondary
<b>Tanrikulu,<sup>54</sup> 2015</b>	8	1	8	1	16	16	16	16	50%	50%	Targeted	Secondary
<b>Trip,<sup>55</sup> 2015</b>	270	3	230	3	11.8	10 to 14	11.8	10 to 14	44%	51%	Universal	Secondary
<b>Tsiantis,<sup>56</sup> 2013</b>	333	10	333	10	10	9 to 12	10	9 to 12	N/A	N/A	Universal	Primary
<b>van den Berg,<sup>57</sup> 2012</b>	253	11	398	16	11.3	10 to 12	11.3	10 to 12	52%	52%	Universal	Primary
<b>Wójcik,<sup>85</sup> 2018</b>	43	6	53	6	13.8	12 to 15	13.7	12 to 15	53%	42%	Universal	Secondary
<b>Yan,<sup>58</sup> 2019</b>	56	1	58	1	11.25	10 to 11	11.09	10 to 11	48%	41%	Targeted	Primary
<b>Yeager,<sup>64</sup> 2012</b>	81	3	162	6	15	14 to 16	15	14 to 16	45%	45%	Universal	Secondary

Abbreviations: N/A, not available; y, years.



eTable 6. Meta-analyses of efficacy of randomized-controlled trials testing anti-bullying school interventions per region												
Variable	Time of assessment	Region	Mean duration of intervention (mean length of follow-up, when applicable) (w)	k	N of individuals on groups	N of individuals control groups	Meta-analysis		Heterogeneity		Publication bias	
							Cohen's d, mean (95% CI) <sup>a</sup>	FDR corrected p-value	p-value (Q)	I <sup>2</sup> (%)	Orwin's FSN	Eggers regression intercept (p-value)
Overall bullying <sup>b</sup>	End of intervention	All countries	32.6	45	46847	45744	-0.150 (-0.191 to -0.109)	<.001	<.001	85.3	209	.026
		Europe	33.0	23	25453	24939	-0.143 (-0.191 to -0.095)	<.001	<.001	77.7	104	.025
		North America	30.3	13	9614	9007	-0.170 (-0.290 to -0.050)	.033	<.001	92.9	72	.92
	Follow-up	All countries	31.5 (44.0)	21	11020	11977	-0.171 (-0.243 to -0.099)	<.001	<.001	80.0	16	.09
		Europe	24.6 (27.3)	6	2632	2804	-0.154 (-0.263 to -0.045)	.030	.04	57.9	5	.20
		North America	29.3 (58.2)	7	2744	2847	-0.185 (-0.323 to -0.047)	.035	<.001	84.5	9	.45
Bullying perpetration	End of intervention	All countries	35.9	35	43199	42991	-0.111 (-0.146 to -0.077)	<.001	<.001	78.8	558	.006
		Europe	40.2	16	23632	23662	-0.106 (-0.156 to -0.056)	<.001	<.001	80.2	439	.05
		North America	30.3	13	9614	9007	-0.114 (-0.184 to -0.044)	.023	<.001	80.0	170	.37
	Follow-up	All countries	33.4 (39.2)	17	7889	7993	-0.175 (-0.276 to -0.073)	.029	<.001	85.9	49	.18
		Europe	24.6 (27.3)	6	2632	2804	-0.097 (-0.235 to 0.042)	.21	.001	76.7	N/A	.25
		North America	40.0 (65.8)	4	1151	1109	-0.203 (-0.488 to 0.081)	.20	<.001	91.1	16	.41
Bullying exposure	End of intervention	All countries	34.8	32	37190	37001	-0.158 (-0.225 to -0.092)	<.001	<.001	94.1	25	.33
		Europe	37.9	17	23010	23053	-0.142	<.001	<.001	82.8	91	.27

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							(-0.194 to -0.090)						
		North America	29.8	8	3798	3505	-0.209 (-0.563 to 0.145)	.28	<.001	97.6	37	.15	
	Follow-up	All countries	23.5 (40.9)	13	6971	7629	-0.122 (-0.173 to -0.071)	<.001	.06	41.3	12	.20	
		Europe	28.0 (31.2)	5	2175	2532	-0.147 (-0.272 to -0.022)	.032	<.001	85.4	N/A	.48	
		North America	11.0 (46.0)	4	1780	1932	-0.148 (-0.210 to -0.087)	<.001	.92	0	5	.10	
Cyberbullying <sup>c</sup>	End of intervention	All countries	33.4	5	3271	2472	-0.135 (-0.201 to -0.069)	<.001	.29	19.7	5	.34	
		Europe	21.7	4	1723	1175	-0.182 (-0.259 to -0.104)	<.001	.73	0	4	.76	
		North America	N/A	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Follow-up	All countries	78.0 (52.0)	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Europe	N/A	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		North America	N/A	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Attitudes that discourage bullying	End of intervention	All countries	27.7	25	20537	17778	0.195 (0.145 to 0.245)	<.001	<.001	78.4	4	.007	
		Europe	25.7	15	14644	12314	0.243 (0.164 to 0.323)	<.001	<.001	86.1	2	.01	
		North America	23.7	6	3418	2913	0.110 (0.063 to 0.157)	<.001	.93	0	1	.79	
	Follow-up	All countries	34.8 (50.1)	14	5517	4596	0.143 (0.083 to 0.202)	<.001	.011	52.5	2	.06	
		Europe	40.0 (44.0)	6	1777	1053	0.181 (0.070 to 0.291)	.023	.07	51.1	2	.63	
		North America	13.5 (78.0)	4	2056	2069	0.093 (0.001 to 0.184)	.007	.039	64.1	N/A	.048	
Attitudes that encourage bullying	End of intervention	All countries	27.1	15	15884	14037	-0.115 (-0.184 to -0.046)	.039	<.001	85.2	14	.58	
		Europe	30.4	10	14161	12452	-0.155 (-0.242 to -0.068)	<.001	<.001	89.6	8	.31	

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	Follow-up	North America	12.5	4	1571	1337	-0.016 (-0.122 to 0.090)	.78	.14	45.0	N/A	.68
		All countries	19.2 (48.6)	7	3329	3299	-0.123 (-0.197 to -0.048)	.002	.07	48.6	69	.69
		Europe	48.0 (36.0)	3	1621	1431	-0.091 (-0.194 to -0.012)	.11	.27	24.0	N/A	.52
		North America	6.0 (65.0)	3	1611	1754	-0.168 (-0.232 to -0.104)	<.001	.535	0.0	12	.16
Mental health problems	End of intervention	All countries	25.7	20	14543	14649	-0.205 (-0.277 to -0.133)	<.001	<.001	83.7	10	<.001
		Europe	32.8	10	9946	9942	-0.278 (-0.405 to -0.150)	<.001	<.001	92.5	12	.03
		North America	14.8	4	3615	3665	-0.118 (-0.236 to -0.001)	.050	.048	62.1	2	.007
	Follow-up	All countries	20.8 (27.3)	6	1605	1621	-0.202 (-0.347 to -0.056)	.010	.012	65.7	4	.001
		Europe	14.5 (19.3)	3	833	1015	-0.259 (-0.603 to 0.085)	.18	.010	78.5	4	.09
		North America	N/A	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
School climate	End of intervention	All countries	36.5	12	11417	11995	0.070 (0.044 to 0.096)	<.001	.70	0	N/A	.02
		Europe	51.5	4	3629	4001	0.049 (0.006 to 0.093)	.034	.87	0	N/A	.29
		North America	26.0	4	1928	2055	0.147 (0.069 to 0.226)	<.001	.81	0	1	.59
	Follow-up	All countries	18.8 (62.4)	5	2647	2978	0.135 (0.037 to 0.233)	.031	.006	72.0	1	.923
		Europe	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		North America	6.0 (69.3)	3	1611	1754	0.197 (0.091 to 0.304)	<.001	.07	62.0	1	.97

a. Positive Cohen's d values mean that the anti-bullying intervention is associated with an increase in the outcome variable, while negative Cohen's d values mean that the anti-bullying intervention is associated with a decrease in the outcome variable.

b. Overall bullying is a pooled measure including traditional bullying perpetration, traditional bullying exposure, and cyberbullying.

c. Cyberbullying reports pooled cyberbullying perpetration and cyberbullying exposure data.

Abbreviations: CI, confidence interval; FSN, fail safe number; k, number of samples; N, number; N/A, not applicable; w, weeks.

<b>eTable 7. Population impact number of universal anti-bullying school interventions per region</b>								
<b>Variable</b>	<b>Assessed at</b>	<b>Country region</b>	<b><i>k</i></b>	<b>NNT (95% CI)</b>	<b>PIN for bullying prevalence of 5% (95% CI)</b>	<b>PIN for bullying prevalence of 10% (95% CI)</b>	<b>PIN for bullying prevalence of 15% (95% CI)</b>	<b>PIN for bullying prevalence of 20% (95% CI)</b>
Overall bullying <sup>a</sup>	End of intervention	All countries	39	22 (17 to 32)	440 (340 to 640)	220 (170 to 320)	147 (113 to 213)	110 (85 to 160)
		Europe	20	24 (17 to 36)	480 (340 to 720)	240 (170 to 360)	160 (113 to 240)	120 (85 to 180)
		North America	11	20 (11 to 70)	400 (220 to 1400)	200 (110 to 700)	133 (73 to 467)	100 (55 to 350)
	Follow-up	All countries	17	19 (13 to 37)	380 (260 to 740)	190 (130 to 370)	127 (87 to 247)	95 (65 to 185)
		Europe	6	22 (12 to 78)	440 (240 to 1560)	220 (120 to 780)	147 (80 to 520)	110 (60 to 390)
		North America	5	15 (8 to 71)	300 (160 to 1420)	150 (80 to 710)	100 (53 to 473)	75 (40 to 355)
Bullying perpetration	End of intervention	All countries	33	31 (23 to 46)	620 (460 to 920)	310 (230 to 460)	207 (153 to 307)	155 (115 to 230)
		Europe	16	32 (22 to 62)	640 (440 to 1240)	320 (220 to 620)	213 (147 to 413)	160 (110 to 310)
		North America	11	31 (17 to 104)	620 (340 to 2080)	310 (170 to 1040)	207 (113 to 693)	155 (85 to 520)
	Follow-up	All countries	14	19 (11 to 56)	380 (220 to 1120)	190 (110 to 560)	127 (73 to 373)	95 (55 to 280)
		Europe	6	35 (14 to 3656)	700 (280 to 73120)	350 (140 to 36560)	233 (93 to 24373)	175 (70 to 18280)
		North America	3	12 (5 to 3641)	240 (100 to 72820)	120 (50 to 36410)	80 (33 to 24273)	60 (25 to 18205)
Bullying exposure	End of intervention	All countries	27	21 (14 to 39)	420 (280 to 780)	210 (140 to 390)	140 (93 to 260)	105 (70 to 195)
		Europe	15	24 (17 to 40)	480 (340 to 800)	240 (170 to 600)	160 (113 to 267)	120 (85 to 200)
		North America	6	14 (5 to 3587)	280 (80 to 71740)	140 (40 to 35870)	93 (27 to 23913)	70 (20 to 17935)
	Follow-up	All countries	10	53 (22 to 3779)	1060 (440 to 75580)	530 (220 to 37790)	353 (147 to 25193)	265 (110 to 18895)
		Europe	5	141 (15 to 3591)	2820 (300 to 71820)	1410 (150 to 35910)	940 (100 to 23940)	705 (75 to 17955)
		North America	2	N/A	N/A	N/A	N/A	N/A
Cyberbullying <sup>b</sup>	End of intervention	All countries	4	25 (15 to 54)	500 (300 to 1080)	250 (150 to 540)	167 (100 to 360)	125 (75 to 270)
		Europe	3	19 (13 to 34)	380 (260 to 680)	190 (130 to 340)	127 (87 to 227)	95 (65 to 170)
		North America	1	N/A	N/A	N/A	N/A	N/A
	Follow-up	All countries	1	N/A	N/A	N/A	N/A	N/A

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		Europe	0	N/A	N/A	N/A	N/A	N/A
		North America	0	N/A	N/A	N/A	N/A	N/A
Attitudes that discourage bullying	End of intervention	All countries	21	17 (14 to 24)	340 (280 to 480)	170 (140 to 240)	113 (93 to 160)	85 (70 to 120)
		Europe	13	15 (11 to 22)	300 (220 to 440)	150 (110 to 220)	100 (73 to 147)	75 (55 to 110)
		North America	4	33 (22 to 67)	660 (440 to 1340)	330 (220 to 670)	220 (147 to 447)	165 (110 to 335)
	Follow-up	All countries	13	26 (17 to 50)	520 (340 to 1000)	260 (170 to 500)	173 (113 to 333)	130 (85 to 250)
		Europe	6	18 (11 to 50)	360 (220 to 1000)	180 (110 to 500)	120 (73 to 333)	90 (55 to 250)
		North America	3	71 (32 to 3965)	1420 (640 to 79300)	710 (320 to 39650)	473 (213 to 26433)	355 (160 to 19825)
Attitudes that encourage bullying	End of intervention	All countries	14	29 (17 to 71)	580 (340 to 1420)	290 (170 to 710)	193 (113 to 473)	145 (85 to 355)
		Europe	10	21 (13 to 51)	420 (260 to 1020)	210 (130 to 510)	140 (87 to 340)	105 (65 to 255)
		North America	3	222 (23 to 3600)	4440 (460 to 72000)	2220 (230 to 36000)	1480 (153 to 24000)	1110 (115 to 18000)
	Follow-up	All countries	5	28 (19 to 55)	560 (380 to 1100)	280 (190 to 550)	187 (127 to 367)	140 (95 to 275)
		Europe	3	38 (17 to 3866)	760 (340 to 77320)	380 (170 to 38660)	253 (113 to 25773)	190 (85 to 19330)
		North America	2	N/A	N/A	N/A	N/A	N/A
Mental health problems	End of intervention	All countries	15	16 (11 to 26)	320 (220 to 520)	160 (110 to 260)	107 (73 to 173)	80 (55 to 110)
		Europe	8	12 (8 to 22)	240 (160 to 440)	120 (80 to 220)	80 (53 to 147)	60 (40 to 110)
		North America	4	29 (14 to 3570)	580 (280 to 71400)	290 (140 to 35700)	193 (93 to 23800)	145 (70 to 17850)
	Follow-up	All countries	5	16 (8 to 118)	320 (160 to 2360)	160 (80 to 1180)	107 (53 to 787)	80 (40 to 590)
		Europe	3	13 (5 to 3611)	260 (100 to 72220)	130 (50 to 36110)	87 (33 to 24073)	65 (25 to 18055)
		North America	0	N/A	N/A	N/A	N/A	N/A
School climate	End of intervention	All countries	9	52 (37 to 88)	1040 (740 to 1760)	520 (370 to 880)	347 (247 to 587)	260 (185 to 440)
		Europe	4	71 (37 to 594)	1420 (740 to 11880)	710 (370 to 5940)	473 (247 to 3960)	355 (185 to 2970)
		North America	2	N/A	N/A	N/A	N/A	N/A
	Follow-up	All countries	4	28 (14 to 1190)	560 (280 to 23800)	280 (140 to 11900)	187 (93 to 7933)	140 (70 to 5950)
		Europe	1	N/A	N/A	N/A	N/A	N/A

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		North America	2	N/A	N/A	N/A	N/A	N/A
<p>a. Overall bullying is a pooled measure including traditional bullying perpetration, traditional bullying exposure, and cyberbullying.</p> <p>b. Cyberbullying reports pooled cyberbullying perpetration and cyberbullying exposure data.</p> <p>Abbreviations: CI, confidence interval; N/A, not applicable; NNT, number needed to treat; PIN, population impact number (PIN is defined as children in the total population for whom one event will be prevented by the intervention).</p>								

eTable 8. Meta-analyses of efficacy of randomized-controlled trials testing universal or targeted anti-bullying school interventions												
Variable	Time of assessment	Universal or targeted	Mean duration of intervention (mean length of follow-up, when applicable) (w)	k	N of individuals intervention groups	N of individuals control groups	Meta-analysis		Heterogeneity		Publication bias	
							Cohen's d, mean (95% CI) <sup>a</sup>	FDR corrected p-value	p-value (Q)	I <sup>2</sup> (%)	Orwin's FSN	Eggers regression intercept (p-value)
Overall bullying <sup>b</sup>	End of intervention	All studies	32.6	45	46847	45744	-0.150 (-0.191 to -0.109)	<.001	<.001	85.3	209	.026
		Universal studies	35.2	39	46289	45385	-0.150 (-0.192 to -0.107)	<.001	<.001	87.3	186	.030
		Targeted studies	15.5	6	558	359	-0.131 (-0.254 to -0.008)	.06	.89	0	33	.05
	Follow-up	All studies	31.5 (44.0)	21	11020	11977	-0.171 (-0.243 to -0.099)	<.001	<.001	80.0	16	.09
		Universal studies	35.9 (46.1)	17	10608	10549	-0.260 (-0.253 to -0.094)	<.001	<.001	83.4	9	.13
		Targeted studies	14.0 (32.0)	4	412	428	-0.125 (-0.259 to 0.010)	.09	.33	12.7	4	.11
Bullying perpetration	End of intervention	All studies	35.9	35	43199	42991	-0.111 (-0.146 to -0.077)	<.001	<.001	78.8	558	.006
		Universal studies	36.5	33	42727	42721	-0.111 (-0.147 to -0.075)	<.001	<.001	79.9	554	.008
		Targeted studies	26.0	2	472	270	-0.105 (-0.222 to 0.012)	.10	.36	0	N/A	N/A
	Follow-up	All studies	33.4 (39.2)	17	7889	7993	-0.175 (-0.276 to -0.073)	.049	<.001	85.9	49	.18
		Universal studies	38.0 (41.1)	14	7646	7743	-0.173 (-0.284 to -0.062)	.004	<.001	88.1	42	.25
		Targeted studies	13.3 (44.0)	3	243	250	-0.240 (-0.619 to 0.139)	.26	<.001	91.1	4	.41
Bullying exposure	End of intervention	All studies	34.8	32	37190	37001	-0.158 (-0.225 to -0.092)	<.001	<.001	94.1	25	.33

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		Universal studies	37.9	27	36878	36650	-0.158 (-0.229 to -0.088)	<.001	<.001	95.0	21	.34
		Targeted studies	17.6	5	312	351	-0.127 (-0.263 to 0.009)	.09	.87	0	43	.17
	Follow-up	All studies	23.5 (40.9)	13	6971	7629	-0.122 (-0.173 to -0.071)	<.001	.06	41.3	12	.20
		Universal studies	29.6 (39.8)	10	6594	7207	-0.118 (-0.176 to -0.061)	<.001	.038	49.3	10	.41
		Targeted studies	14.7 (32.0)	3	377	422	-0.149 (-0.280 to -0.018)	.048	.32	13.4	16	.49
Cyberbullying <sup>c</sup>	End of intervention	All studies	33.4	5	3271	2472	-0.135 (-0.201 to -0.069)	<.001	.29	19.7	5	.34
		Universal studies	40.5	4	3263	2464	-0.138 (-0.213 to -0.064)	<.001	.19	37.1	4	.38
		Targeted studies	5.0	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Follow-up	All studies	78.0 (52.0)	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Universal studies	78.0 (52.0)	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Targeted studies	N/A	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Attitudes that discourage bullying	End of intervention	All studies	27.7	25	20537	17778	0.195 (0.145 to 0.245)	<.001	<.001	78.4	4	.007
		Universal studies	29.3	21	19964	17485	0.190 (0.142 to 0.239)	<.001	<.001	77.3	3	.020
		Targeted studies	19.0	4	573	293	0.614 (0.013 to 1.216)	.07	<.001	86.7	1	.30
	Follow-up	All studies	34.8 (50.1)	14	5517	4596	0.143 (0.083 to 0.202)	<.001	.011	52.5	2	.06
		Universal studies	36.4 (50.0)	13	5330	4402	0.130 (0.070 to 0.190)	<.001	.026	48.4	1	.06
		Targeted studies	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Attitudes that encourage bullying	End of intervention	All studies	27.1	15	15884	14037	-0.115 (-0.184 to -0.046)	.039	<.001	85.2	14	.58
		Universal studies	27.9	14	15459	13843	-0.119 (-0.190 to -0.049)	.040	<.001	86.6	13	.52

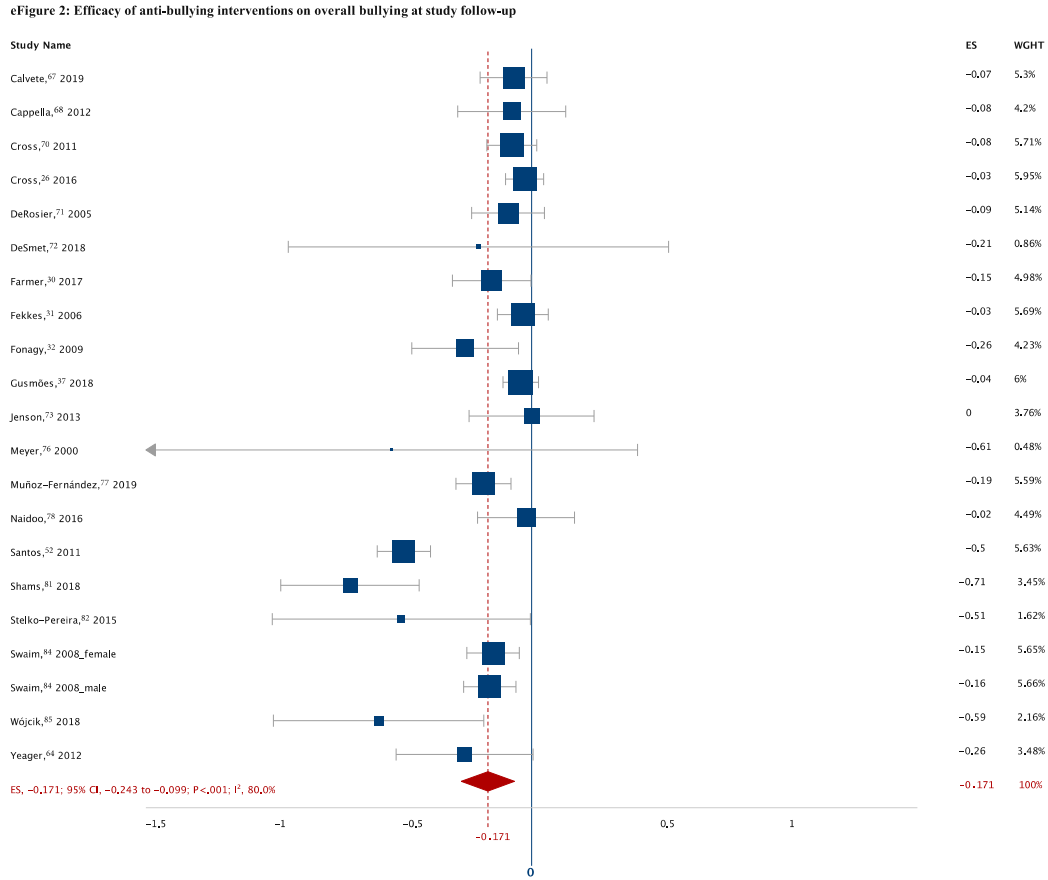
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		Targeted studies	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Follow-up	All studies	19.2 (48.6)	7	3329	3299	-0.123 (-0.197 to -0.048)	.004	.07	48.6	69	.69
		Universal studies	24.5 (52.8)	5	3045	2991	-0.120 (-0.177 to -0.063)	<.001	.36	9.1	55	.68
		Targeted studies	8.5 (38.0)	2	284	308	-0.047 (-0.451 to 0.356)	.82	.008	85.9	N/A	N/A
Mental health problems	End of intervention	All studies	25.7	20	14543	14649	-0.205 (-0.277 to -0.133)	<.001	<.001	83.7	10	<.001
		Universal studies	28.3	15	14231	14298	-0.211 (-0.292 to -0.131)	<.001	<.001	87.7	7	.001
		Targeted studies	17.6	5	312	351	-0.182 (-0.292 to -0.071)	.002	.99	0	18	.47
	Follow-up	All studies	20.8 (27.3)	6	1605	1621	-0.202 (-0.347 to -0.056)	.010	.012	65.7	4	.001
		Universal studies	22.0 (22.4)	5	1418	1427	-0.205 (-0.381 to -0.030)	.037	.010	69.9	3	.003
		Targeted studies	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
School climate	End of intervention	All studies	36.5	12	11417	11995	0.070 (0.044 to 0.096)	<.001	.70	0	N/A	.02
		Universal studies	41.6	9	11127	11667	0.067 (0.040 to 0.094)	<.001	.56	0	N/A	.11
		Targeted studies	21.3	3	290	328	0.128 (0.014 to 0.242)	.049	.87	0	1	.26
	Follow-up	All studies	18.8 (62.4)	5	2647	2978	0.135 (0.037 to 0.233)	.05	.006	72.0	1	.923
		Universal studies	19.5 (65.0)	4	2460	2784	0.120 (0.003 to 0.236)	.07	.004	77.3	1	.72
		Targeted studies	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<p>a. Positive Cohen's d values mean that the anti-bullying intervention is associated with an increase in the outcome variable, while negative Cohen's d values mean that the anti-bullying intervention is associated with a decrease in the outcome variable.</p> <p>b. Overall bullying is a pooled measure including traditional bullying perpetration, traditional bullying exposure, and cyberbullying.</p> <p>c. Cyberbullying reports pooled cyberbullying perpetration and cyberbullying exposure data.</p> <p>Abbreviations: CI, confidence interval; FSN, fail safe number; k, number of samples; N, number; N/A, not applicable; w, weeks.</p>												

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eFigure 2. Efficacy of anti-bullying interventions on overall bullying at study follow-up



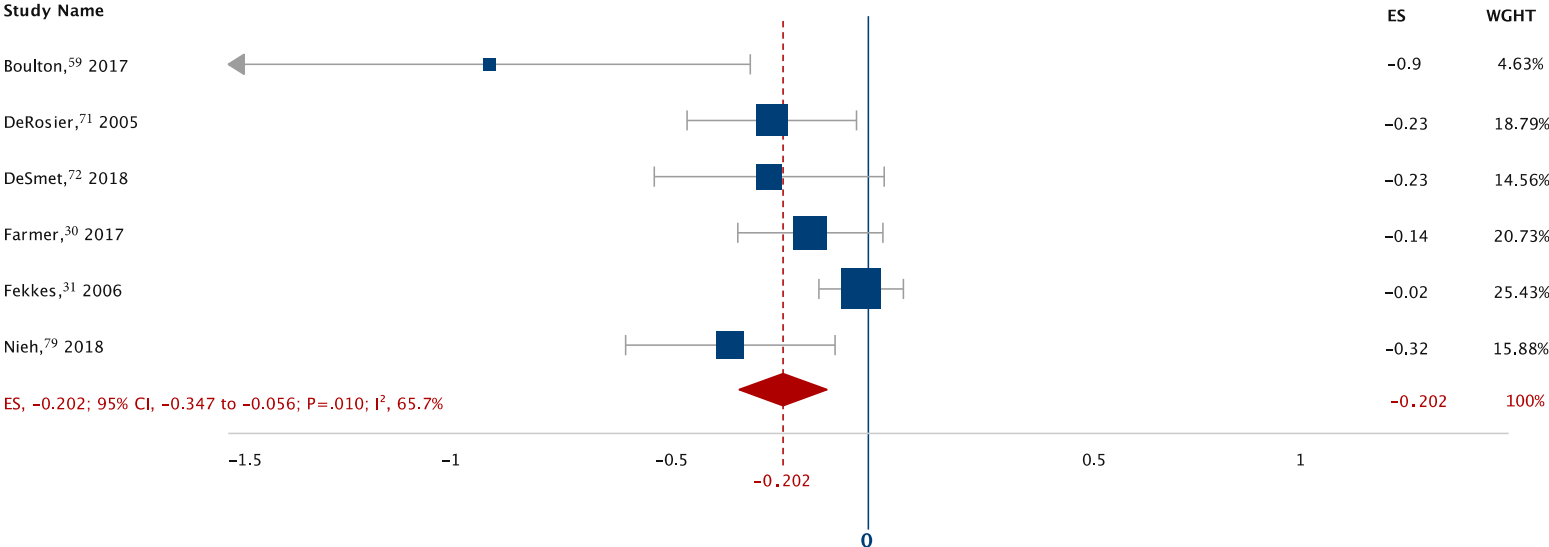
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Legend: Meta-analysis of effect on overall bullying (as a pooled measure including bullying perpetration, bullying exposure, and cyberbullying) at study follow-up. Mean follow-up was 43.2 weeks (range 3 to 104 weeks).

Abbreviations: CI, confidence interval.

eFigure 3. Efficacy of anti-bullying interventions on mental health problems at study follow-up

eFigure 3: Efficacy of anti-bullying interventions on mental health problems at follow-up



Legend: Meta-analysis of effect on mental health problems at follow-up. Mean follow-up was 27.3 weeks (range 2 to 52 weeks).

Abbreviations: CI, confidence interval.

<b>eTable 9. Meta-Regression Analyses (Association Between Variables and Effect Size of Anti-Bullying Interventions)</b>						
<b>Variable</b>	<b>Assessed at</b>	<b>Meta-regression variable</b>	<b>k</b>	<b>Uncorrected coefficient (95% CI)</b>	<b>Z-value</b>	<b>FDR corrected p-value</b>
Overall bullying <sup>a</sup>	Study endpoint	Quality	45	-0.0272 (-0.0542 to -0.0001)	-1.97	.23
		Year of publication	45	-0.0048 (-0.0136 to 0.0040)	-1.07	.91
		Mean age	44	0.0179 (-0.0038 to 0.0395)	1.62	..66
		Mean age (>10 years)	44	0.0474 (-0.0391 to 0.1338)	1.07	.92
		Percentage of females	38	0.0049 (-0.0051 to 0.0151)	0.95	.92
		Sample size	45	0.0000 (-0.0001 to 0.0001)	1.61	.64
		Sample size (>1000)	45	0.0181 (-0.0645 to 0.1006)	0.43	1.00
		Duration of intervention	45	0.0006 (-0.0017 to 0.0020)	0.94	.91
		Duration of intervention (≥1 year)	45	0.0393 (-0.0627 to 0.1412)	0.75	1.00
		Universal intervention	45	0.0230 (-0.1671 to 0.2130)	0.24	1.00
	Follow-up	Quality	21	0.0070 (-0.0453 to 0.0593)	0.26	.96
		Year of publication	21	-0.0030 (-0.0188 to 0.0128)	-0.37	.99
		Mean age	21	-0.0005 (-0.0268 to 0.0259)	-0.03	1.00
		Mean age (>10 years)	21	0.0114 (-0.1337 to 0.1556)	0.15	.89
		Percentage of females	18	-0.0008 (-0.0014 to 0.0020)	-0.55	.76
		Sample size	21	0.0001 (-0.0001 to 0.0002)	2.22	.18
		Sample size (>1000)	21	0.1364 (0.0071 to 0.2657)	2.07	.27
		Duration of intervention	20	0.0017 (-0.0005 to 0.0039)	1.50	.64
		Duration of intervention (≥1 year)	20	0.0994 (-0.0648 to 0.2636)	1.19	.75
		Length of follow-up	21	0.0001 (-0.0025 to 0.0025)	0.03	.99
Universal intervention	21	0.0114 (-0.2325 to 0.2098)	-0.10	1.00		
Bullying perpetration	Study endpoint	Quality	35	-0.0233 (-0.0472 to 0.0005)	-1.92	.21
		Year of publication	35	-0.0033 (-0.0105 to 0.0038)	-0.91	.91

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		Mean age	34	0.0232 (0.0054 to 0.0410)	2.55	.43
		Mean age (>10 years)	34	0.0758 (0.0083 to 0.1433)	2.20	.49
		Percentage of females	28	0.0005 (-0.0096 to 0.0106)	0.10	1.00
		Sample size	35	0.0000 (-0.0001 to 0.0001)	2.14	.50
		Sample size (>1000)	35	0.0127 (-0.0589 to 0.0843)	0.35	.99
		Duration of intervention	35	0.0005 (-0.0005 to 0.0016)	0.95	.94
		Duration of intervention ( $\geq 1$ year)	35	0.0059 (-0.0777 to 0.0895)	0.14	1.00
		Universal intervention	35	0.0127 (-0.1725 to 0.1978)	0.13	1.00
	Follow-up	Quality	17	0.0045 (-0.0582 to 0.0673)	0.14	.95
		Year of publication	17	-0.0002 (-0.0004 to 0.0001)	-1.67	.71
		Mean age	17	0.0048 (-0.0287 to 0.0383)	0.28	1.00
		Mean age (>10 years)	17	0.0078 (-0.1895 to 0.2051)	0.08	1.00
		Percentage of females	14	-0.0200 (-0.0358 to -0.0043)	-2.99	.29
		Sample size	17	0.0001 (-0.0001 to 0.0003)	1.61	.62
		Sample size (>1000)	17	0.2369 (0.0542 to 0.4195)	2.54	.43
		Duration of intervention	16	0.0018 (-0.0014 to 0.0051)	1.10	.98
		Duration of intervention ( $\geq 1$ year)	16	0.0733 (-0.1670 to 0.3136)	0.60	.99
		Length of follow-up	16	-0.0003 (-0.0036 to 0.0030)	-0.17	1.00
		Universal intervention	17	0.0302 (-0.3057 to 0.3661)	0.18	1.00
		Bullying exposure	Study endpoint	Quality	32	-0.0510 (-0.0999 to -0.0021)
Year of publication	32			0.0019 (-0.0130 to 0.0169)	0.25	1.00
Mean age	31			0.0196 (-0.0164 to 0.0557)	1.07	.89
Mean age (>10 years)	31			0.0374 (-0.1045 to 0.1793)	0.52	.95
Percentage of females	27			0.0043 (-0.0087 to 0.0173)	0.65	.98
Sample size	27			0.0000 (-0.0001 to 0.0001)	0.26	.98

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		Sample size (>1000)	27	-0.0580 (-0.2271 to 0.1110)	-0.67	.99
		Duration of intervention	27	0.0008 (-0.0019 to 0.0035)	0.58	.94
		Duration of intervention ( $\geq 1$ year)	27	0.0947 (-0.1156 to 0.3049)	0.88	.87
		Universal intervention	27	-0.0151 (-0.2833 to 0.2531)	-0.11	1.00
	Follow-up	Quality	13	-0.0206 (-0.0552 to 0.0140)	-1.17	.37
		Year of publication	12	-0.0003 (-0.0101 to 0.0094)	-0.07	.99
		Mean age	12	-0.0040 (-0.0241 to 0.0161)	-0.39	.83
		Mean age (>10 years)	12	0.0066 (-0.1247 to 0.1379)	0.10	.98
		Percentage of females	12	-0.0002 (-0.0024 to 0.0020)	-0.20	1.00
		Sample size	12	0.0000 (-0.0001 to 0.0001)	1.41	.96
		Sample size (>1000)	12	-0.0233 (-0.1329 to 0.0863)	-0.42	.89
		Duration of intervention	11	0.0019 (-0.0012 to 0.0050)	1.19	.95
		Duration of intervention ( $\geq 1$ year)	11	-0.0022 (-0.2168 to 0.2125)	-0.02	.99
		Length of follow-up	11	-0.0003 (-0.0028 to 0.0022)	-0.25	.87
Universal intervention	13	0.0322 (-0.1192 to 0.1835)	0.42	.92		
Attitudes that discourage bullying	Study endpoint	Quality	25	0.0047 (-0.0328 to 0.0423)	0.25	.92
		Year of publication	25	-0.0015 (-0.0098 to 0.0068)	-0.36	.98
		Mean age	23	-0.0102 (-0.0369 to 0.0165)	-0.75	1.00
		Mean age (>10 years)	23	-0.0109 (-0.1192 to 0.0975)	-0.20	1.00
		Percentage of females	18	-0.0129 (-0.0229 to -0.0029)	-2.53	.43
		Sample size	25	-0.0001 (-0.0001 to -0.0001)	-1.21	.90
		Sample size (>1000)	25	-0.0569 (-0.1575 to 0.0438)	-1.11	1.00
		Duration of intervention	25	0.0003 (-0.0026 to 0.0031)	0.17	1.00
		Duration of intervention ( $\geq 1$ year)	25	0.0312 (-0.1008 to 0.1631)	0.46	.94
		Universal intervention	25	-0.0452 (-0.2420 to 0.1516)	-0.45	.93

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	Follow-up	Quality	14	-0.0026 (-0.0589 to 0.0537)	-0.09	.98
		Year of publication	14	-0.0006 (-0.0111 to 0.0099)	-0.11	.99
		Mean age	14	-0.0141 (-0.0364 to 0.0081)	-1.24	.95
		Mean age (>10 years)	14	-0.0555 (-0.1785 to 0.0676)	-0.88	.93
		Percentage of females	8	0.0004 (-0.0024 to 0.0032)	0.26	1.00
		Sample size	14	-0.0002 (-0.0004 to 0.0001)	-1.78	.62
		Sample size (>1000)	14	-0.1163 (-0.2288 to -0.0038)	-2.03	.56
		Duration of intervention	13	0.0006 (-0.0015 to 0.0027)	0.54	.96
		Duration of intervention ( $\geq 1$ year)	13	0.0561 (-0.0998 to 0.2119)	0.70	.97
		Length of follow-up	14	-0.0018 (-0.0040 to 0.0004)	-1.64	.72
		Universal intervention	14	-0.1328 (-0.3422 to 0.0766)	-1.24	.93
Attitudes that encourage bullying	Study endpoint	Quality	15	0.1060 (0.0242 to 0.1878)	2.54	.18
		Year of publication	15	0.0141 (-0.0137 to 0.0420)	0.99	.93
		Mean age	14	-0.0654 (-0.1578 to 0.0270)	-1.39	.83
		Mean age (>10 years)	14	0.0555 (-0.2321 to 0.3431)	0.38	.98
		Percentage of females	13	0.0269 (-0.0097 to 0.0635)	1.44	.81
		Sample size	15	0.0000 (-0.0001 to 0.0001)	-0.58	.98
		Sample size (>1000)	15	-0.1364 (-0.3752 to 0.1024)	-1.12	1.00
		Duration of intervention	15	-0.0017 (-0.0089 to 0.0054)	-0.48	.94
		Duration of intervention ( $\geq 1$ year)	15	-0.1008 (-0.4554 to 0.2539)	-0.56	.97
	Universal intervention	15	-0.0470 (-.5808 to 0.4869)	-0.17	1.00	
	Follow-up	Quality	7	0.0014 (-0.1045 to 0.1072)	0.03	.99
		Year of publication	7	0.0114 (-0.0119 to 0.0347)	0.96	.94
		Mean age	7	0.0173 (-0.0248 to 0.0594)	0.80	.97
		Mean age (>10 years)	7	0.1257 (-0.0257 to 0.2772)	1.63	.68

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		Percentage of females	6	-0.0003 (-0.0033 to 0.0027)	-0.19	1.00
		Sample size	7	0.0001 (-0.0002 to 0.0003)	0.58	.98
		Sample size (>1000)	7	0.0255 (-0.1351 to 0.1860)	0.31	1.00
		Duration of intervention	6	-0.0010 (-0.0048 to 0.0027)	-0.54	.96
		Duration of intervention (≥1 year)	6	-0.0813 (-0.3298 to 0.1672)	-0.64	1.00
		Length of follow-up	7	-0.0019 (-0.0055 to 0.0017)	-1.04	.91
		Universal intervention	7	-0.0161 (-0.2113 to 0.1791)	-0.16	1.00
Cyberbullying <sup>c</sup>	Study endpoint	Quality	5	0.0053 (-0.0627 to 0.0734)	0.15	.95
		Year of publication	5	-0.0318 (-0.0916 to 0.0280)	-1.04	.82
		Mean age	5	0.0366 (-0.0683 to 0.1415)	0.68	.91
		Mean age (>10 years)	5 <sup>b</sup>	N/A	N/A	N/A
		Percentage of females	5	-0.0028 (-0.0405 to 0.0348)	-0.15	1.00
		Sample size	5	0.0001 (0.0001 to 0.0003)	2.01	.39
		Sample size (>1000)	5	0.1305 (-0.0065 to 0.2474)	1.86	.54
		Duration of intervention	5	0.0023 (0.0001 to 0.0045)	2.06	.41
		Duration of intervention (≥1 year)	5	0.1045 (-0.0022 to 0.2113)	1.92	.56
	Universal intervention	5	0.1897 (-0.6726 to 1.0521)	0.43	.96	
	Follow-up	Quality	<4	N/A	N/A	N/A
		Year of publication	<4	N/A	N/A	N/A
		Mean age	<4	N/A	N/A	N/A
		Mean age (>10 years)	<4	N/A	N/A	N/A
		Percentage of females	<4	N/A	N/A	N/A
		Sample size	<4	N/A	N/A	N/A
		Sample size (>1000)	<4	N/A	N/A	N/A
Duration of intervention		<4	N/A	N/A	N/A	

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		Duration of intervention ( $\geq 1$ year)	<4	N/A	N/A	N/A
		Length of follow-up	<4	N/A	N/A	N/A
		Universal intervention	<4	N/A	N/A	N/A
Mental health problems	Study endpoint	Quality	18	0.0442 (-0.0178 to 0.1062)	1.40	.60
		Year of publication	18	0.0040 (-0.0154 to 0.0233)	0.40	.97
		Mean age	18	-0.0203 (-0.0604 to 0.0199)	-0.99	0.71
		Mean age (>10 years)	18	0.0078 (-0.1621 to 0.1778)	0.09	1.00
		Percentage of females	18	0.0046 (-0.0101 to 0.0192)	0.61	.88
		Sample size	18	0.0001 (0.0000 to 0.0001)	2.41	.16
		Sample size (>1000)	18	0.1765 (0.0166 to 0.3665)	2.16	.17
		Duration of intervention	18	0.0022 (-0.0002 to 0.0045)	1.82	.57
		Duration of intervention ( $\geq 1$ year)	18	0.1571 (-0.0938 to 0.4080)	1.23	.91
		Universal intervention	18	-0.0580 (-0.2853 to 0.1693)	-0.50	.93
	Follow-up	Quality	6	-0.0817 (-0.1907 to 0.0272)	-1.47	.75
		Year of publication	6	0.0011 (-0.0353 to 0.0375)	0.06	.99
		Mean age	6	-0.0322 (-0.1212 to 0.0567)	-0.71	.99
		Mean age (>10 years)	6	0.1009 (-0.3035 to 0.5053)	0.49	.94
		Percentage of females	6	0.0185 (-0.0233 to 0.0603)	0.87	.94
		Sample size	6	0.0003 (-0.0003 to 0.0008)	0.85	.94
		Sample size (>1000)	6	0.1398 (-0.4217 to 0.7013)	0.49	.95
		Duration of intervention	5	-0.0004 (-0.0139 to 0.0131)	-0.06	.99
		Duration of intervention ( $\geq 1$ year)	5	-0.0384 (-0.6240 to 0.5473)	-0.13	1.00
		Length of follow-up	6	-0.0002 (-0.0084 to 0.0079)	-0.06	.99
Universal intervention	6	0.1364 (-0.3514 to 0.6242)	0.55	.97		
School climate		Quality	12	0.0085 (-0.0066 to 0.0236)	1.11	.68

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	Study endpoint	Year of publication	12	-0.0018 (-0.0070 to 0.0034)	-0.67	1.00
		Mean age	12	-0.0077 (-0.0211 to 0.0056)	-1.14	.99
		Mean age (>10 years)	12	-0.0574 (-0.1263 to 0.0116)	-1.63	.70
		Percentage of females	12	-0.0022 (-0.0088 to 0.0043)	-0.66	1.00
		Sample size	12	-0.0001 (-0.0001 to 0.0001)	-0.99	.92
		Sample size (>1000)	12	-0.0626 (-0.1353 to 0.0101)	-1.69	.72
		Duration of intervention	12	-0.0003 (-0.0008 to 0.0003)	-1.01	.92
		Duration of intervention (≥1 year)	12	-0.0242 (-0.0861 to 0.0378)	-0.76	1.00
		Universal intervention	12	-0.0611 (-0.1783 to 0.0561)	-1.02	.92
	Follow-up	Quality	5	0.1044 (-0.0830 to 0.2917)	1.09	.47
		Year of publication	5	-0.0086 (-0.0350 to 0.0178)	-0.64	1.00
		Mean age	5	0.0194 (-0.0270 to 0.0659)	0.82	.97
		Mean age (>10 years)	5	0.0149 (-0.2144 to 0.2442)	0.13	1.00
		Percentage of females	5	0.0017 (-0.0010 to 0.0045)	1.22	.94
		Sample size	5	-0.0001 (-0.0004 to 0.0002)	-0.62	1.00
		Sample size (>1000)	5	0.0149 (-0.2144 to 0.2442)	0.13	1.00
		Duration of intervention	5	-0.0035 (-0.0083 to 0.0013)	-1.41	.82
		Duration of intervention (≥1 year)	5	-0.1124 (-0.3829 to 0.1580)	-0.81	.96
		Length of follow-up	5	0.0040 (-0.0032 to 0.0112)	1.09	.96
		Universal intervention	5	-0.0857 (-0.359 to 0.188)	-0.61	1.00

a. Overall bullying is a pooled measure including traditional bullying perpetration, traditional bullying exposure, and cyberbullying.

b. Only one category; not possible to conduct this meta-regression.

c. Cyberbullying reports pooled cyberbullying perpetration and cyberbullying exposure data.

Abbreviations: CI, confidence interval; FSN, fail safe number; k, number of samples; N/A, not applicable.

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