

Table of Contents

- Page 2: Supplementary File 1 - Search Strategy
- Page 11: Supplementary File 3 - Effect Size Codebook
- Page 22: Supplementary File 6 - Education Outcomes
- Page 24: Supplementary File 7 - Health-related Outcomes
- Page 26: Supplementary File 8 - Included Studies
- Page 39: Supplementary File 9 - Effect Characteristics

Supplementary File 1 - Search Strategy

Description: The search strategies used in each database.

PubMed Search Strategy

((infant[MeSH Terms] OR child[MeSH Terms] OR minors[MeSH Terms] OR school age population[MeSH Terms] OR pediatrics[MeSH Terms] OR adolescen*[MeSH Terms]) **OR** (boy*[Title/Abstract] OR child*[Title/Abstract] OR girl*[Title/Abstract] OR kindergarten[Title/Abstract] OR paediatric[Title/Abstract] OR pediatric[Title/Abstract] OR infan* OR baby[Title/Abstract] OR babies[Title/Abstract] OR toddler*[Title/Abstract] OR "young child*" [Title/Abstract] OR "early childhood" [Title/Abstract] OR "early years" [Title/Abstract] OR pre-school*[Title/Abstract] OR preschool*[Title/Abstract] OR "pre school*" [Title/Abstract] OR "school age*" [Title/Abstract] OR school-age*[Title/Abstract] OR youth*[Title/Abstract] OR adolescen*[Title/Abstract] OR "young pe*" [Title/Abstract] OR teen*[Title/Abstract] OR preadolescen*[Title/Abstract])) **AND** ((television[MeSH Terms] OR computers[MeSH Terms] OR video games[MeSH Terms] OR sedentary lifestyle[MeSH Terms] OR smartphone[MeSH Terms] OR cell phones[MeSH Terms] OR computers, handheld[MeSH Terms]) **OR** (Television[Title/Abstract] OR TV[Title/Abstract] OR "Screen viewing" [Title/Abstract] OR "Screen time" [Title/Abstract] OR "Screen exposure" [Title/Abstract] OR Computer*[Title/Abstract] OR "Video gam*" [Title/Abstract] OR Sedentary[Title/Abstract] OR Inactivity[Title/Abstract] OR "E gam*" [Title/Abstract] OR e-gam*[Title/Abstract] OR Tablet*[Title/Abstract] OR "Cell phone*" [Title/Abstract] OR "Mobile Phone*" [Title/Abstract] OR "Mobile us*" [Title/Abstract] OR "Media time" [Title/Abstract] OR "Media us*" [Title/Abstract] OR "handheld device*" [Title/Abstract] OR "game device*" [Title/Abstract] OR "gaming device*" [Title/Abstract] OR "game console*" [Title/Abstract] OR "gaming console*" [Title/Abstract] OR "electronic media" [Title/Abstract] OR smartphone*[Title/Abstract] OR "smart phone*" [Title/Abstract])) **AND** ((Review[Title] OR meta-analysis[Title] OR meta-regression[Title] OR synthesis [Title] OR meta-synthesis[Title] OR "meta analysis" [Title] OR "meta regression" [Title] OR "meta synthesis" [Title]) **OR** (Review[Publication Type] OR Meta-Analysis[Publication Type])))

Version 1= Above

Version 2 = delete terms following final "AND", limit results "Review" after search

MEDLINE Search Strategy

(MH ("child" OR "minors" OR Infant OR "school age population" OR "pediatrics" OR "Adolescen*") **OR** TI (boy* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child*" OR child* OR "early childhood" OR "early years" OR pre-school* OR preschool* OR "pre school*" OR "school age*" OR school-age* OR adolescen* OR youth* OR "young pe*" OR teen* OR preadolescen*) **OR** AB (boy* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child*" OR child* OR "early childhood" OR "early years" OR pre-school* OR preschool* OR "pre school*" OR "school age*" OR school-age* OR adolescen* OR youth* OR "young pe*" OR teen* OR preadolescen*)) **AND** (MH ("television" OR "computers" OR "video games" OR "sedentary lifestyle" OR "smartphone" OR "cell phones" OR "computers, handheld") **OR** TI (Television OR TV OR "Screen viewing" OR Screen time OR Screen exposure OR Computer* OR Video gam* OR

Sedentary OR Inactivity OR "E gam*" OR e-gam* OR Tablet* OR "Cell phone*" OR "Mobile Phone*" OR "Mobile us**" OR "Media time" OR "Media us**" OR "handheld device**" OR "game device**" OR "gaming device**" OR "game console**" OR "gaming console**" OR "electronic media" OR smartphone* OR "smart phone**") **OR AB** (Television OR TV OR "Screen viewing" OR Screen time OR Screen exposure OR Computer* OR Video gam* OR Sedentary OR Inactivity OR "E gam*" OR e-gam* OR Tablet* OR "Cell phone*" OR "Mobile Phone*" OR "Mobile us**" OR "Media time" OR "Media us**" OR "handheld device**" OR "game device**" OR "gaming device**" OR "game console**" OR "gaming console**" OR "electronic media" OR smartphone* OR "smart phone**")) **AND** (TI (Review OR meta-analysis OR "meta analysis" OR meta-regression OR "meta regression" OR synthesis OR meta-synthesis OR "meta synthesis"))

Version 1 = above

Version 2 = delete terms following final "AND". Restrict results to review articles.

CINAHL Search Strategy

((MH ("child" OR "Minors (Legal)" OR "pediatrics" OR "Infant")) **OR** TI ("boy*" OR "child*" OR "girl*" OR "kindergarten" OR "paediatric" OR "pediatric" OR "infan*" OR "baby" OR "babies" OR "toddler*" OR "young child**" OR "early childhood" OR "early years" OR "pre-school**" OR "preschool*" OR "pre school*" OR "school age**" OR "school-age**" OR "adolescen**" OR "youth*" OR "young pe*" OR teen* OR "preadolescen**") **OR AB** ("boy*" OR "child*" OR "girl*" OR "kindergarten" OR "paediatric" OR "pediatric" OR "infan*" OR "baby" OR "babies" OR "toddler*" OR "young child**" OR "early childhood" OR "early years" OR "pre-school**" OR "preschool*" OR "pre school*" OR "school age**" OR "school-age**" OR "adolescen**" OR "youth*" OR "young pe*" OR teen* OR "preadolescen**")) **AND** (MH ("television" OR "computers" OR "video games" OR "lifestyle, sedentary" OR "smartphone" OR "cellular phone" OR "computers, hand-held") **OR** TI ("Television" OR "TV" OR "Screen viewing" OR "Screen time" OR "Screen exposure" OR "Computer*" OR "Video gam*" OR "Sedentary" OR "Inactivity" OR "E gam*" OR "e-gam*" OR "Tablet**" OR "Cell phone*" OR "Mobile Phone*" OR "Mobile us*" OR "Media time" OR "Media us*" OR "handheld device**" OR "game device**" OR "gaming device**" OR "game console**" OR "gaming console**" OR "electronic media" OR "smartphone**" OR "smart phone**") **OR AB** ("Television" OR "TV" OR "Screen viewing" OR "Screen time" OR "Screen exposure" OR "Computer**" OR "Video gam*" OR "Sedentary" OR "Inactivity" OR "E gam*" OR "e-gam**" OR "Tablet**" OR "Cell phone**" OR "Mobile Phone**" OR "Mobile us**" OR "Media time" OR "Media us**" OR "handheld device**" OR "game device**" OR "gaming device**" OR "game console**" OR "gaming console**" OR "electronic media" OR "smartphone**" OR "smart phone**")) **AND** (TI("Review" OR "meta-analysis" OR "meta analysis" OR "meta-regression" OR "meta regression" OR "synthesis" OR "meta-synthesis" OR "meta synthesis"))

PsycINFO Search Strategy

((MA("pediatrics")) **OR** (TI (boy* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child**" OR child* OR "early childhood" OR "early years" OR

pre-school* OR preschool* OR pre school* OR school age* OR school-age* OR adolescen* OR youth* OR young pe* OR teen* OR preadolescen*)) **OR** (AB (boy* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child**" OR child* OR "early childhood" OR "early years" OR pre-school* OR preschool* OR pre school* OR school age* OR school-age* OR adolescen* OR youth* OR young pe* OR teen* OR preadolescen*)) **OR** (KW (boy* OR OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child**" OR child* OR "early childhood" OR "early years" OR pre-school* OR preschool* OR pre school* OR school age* OR school-age* OR adolescen* OR youth* OR young pe* OR teen* OR preadolescen*)) **AND** ((MA("Television" OR "Television Viewing" OR "Screen Time" OR "Mobile Devices" OR "Sedentary behavior" OR "computers" OR "computer games" OR "cellular phones")) **OR** (TI(Television OR TV OR Screen viewing OR Screen time OR Screen exposure OR Computer* OR Video gam* OR Sedentary OR Inactivity OR E gam* OR e-gam* OR Tablet* OR Cell phone* OR Mobile Phone* OR Mobile us* OR Media time OR Media us* OR handheld device* OR game device* OR gaming device* OR game console* OR gaming console* OR electronic media OR smartphone* OR smart phone*)) **OR** (AB(Television OR TV OR Screen viewing OR Screen time OR Screen exposure OR Computer* OR Video gam* OR Sedentary OR Inactivity OR E gam* OR e-gam* OR Tablet* OR Cell phone* OR Mobile Phone* OR Mobile us* OR Media time OR Media us* OR handheld device* OR game device* OR gaming device* OR game console* OR gaming console* OR electronic media OR smartphone* OR smart phone*)) **OR** (KW(Television OR TV OR Screen viewing OR Screen time OR Screen exposure OR Computer* OR Video gam* OR Sedentary OR Inactivity OR E gam* OR e-gam* OR Tablet* OR Cell phone* OR Mobile Phone* OR Mobile us* OR Media time OR Media us* OR handheld device* OR game device* OR gaming device* OR game console* OR gaming console* OR electronic media OR smartphone* OR smart phone*)) **AND** (TI(Review OR systematic review OR meta-analysis OR meta-regression OR synthesis OR meta-synthesis OR "meta analysis" OR "meta regression" OR "meta synthesis")))

SPORTDiscus search strategy

((SU ("infant" OR "children" OR "school children" OR "pediatrics" OR "youth" OR "teenagers**"))**OR** (TI (boy* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child**" OR child* OR "early childhood" OR "early years" OR pre-school* OR preschool* OR pre school* OR school age* OR school-age* OR adolescen* OR youth* OR young pe* OR teen* OR preadolescen*)) **OR** (AB (boy* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child**" OR child* OR "early childhood" OR "early years" OR pre-school* OR preschool* OR pre school* OR school age* OR school-age* OR adolescen* OR youth* OR young pe* OR teen* OR preadolescen*)) **OR** (KW (boy* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child**" OR child* OR "early childhood" OR "early years" OR pre-school* OR preschool* OR pre school* OR school age* OR school-age* OR adolescen* OR youth* OR young pe* OR teen* OR preadolescen*)) **AND** ((SU ("Video games" OR "SEDENTARY behavior in children" OR "SEDENTARY lifestyles" OR "COMPUTER games")) **OR** (TI (Television OR TV OR Screen viewing OR Screen time OR Screen exposure OR Computer* OR Video gam* OR Sedentary OR Inactivity OR E gam* OR e-gam* OR Tablet* OR Cell phone* OR Mobile Phone* OR Mobile us* OR Media time OR Media us* OR handheld device* OR game device* OR gaming device* OR

game console* OR gaming console* OR electronic media OR smartphone* OR smart phone*)) **OR** (AB (Television OR TV OR Screen viewing OR Screen time OR Screen exposure OR Computer* OR Video gam* OR Sedentary OR Inactivity OR E gam* OR e-gam* OR Tablet* OR Cell phone* OR Mobile Phone* OR Mobile us* OR Media time OR Media us* OR handheld device* OR game device* OR gaming device* OR game console* OR gaming console* OR electronic media OR smartphone* OR smart phone*)) **OR** (KW (Television OR TV OR Screen viewing OR Screen time OR Screen exposure OR Computer* OR Video gam* OR Sedentary OR Inactivity OR E gam* OR e-gam* OR Tablet* OR Cell phone* OR Mobile Phone* OR Mobile us* OR Media time OR Media us* OR handheld device* OR game device* OR gaming device* OR game console* OR gaming console* OR electronic media OR smartphone* OR smart phone*)) **AND** (TI(Review OR Systematic review OR meta-analysis OR meta-regression OR synthesis OR meta-synthesis OR meta analysis OR meta regression OR meta synthesis))

Education Source Search Strategy

((SU (Children OR Youth OR adolescence)) **OR** (TI (boy* OR child* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child*" OR child* OR "early childhood" OR "early years" OR pre-school* OR preschool* OR "pre school*" OR "school age*" OR "school-age*" OR adolescen* OR youth* OR "young pe*" OR teen* OR preadolescen*))) **OR** (AB (boy* OR child* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child*" OR child* OR "early childhood" OR "early years" OR pre-school* OR preschool* OR "pre school*" OR "school age*" OR "school-age*" OR adolescen* OR youth* OR "young pe*" OR teen* OR preadolescen*))) **OR** (KW (boy* OR child* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child*" OR child* OR "early childhood" OR "early years" OR pre-school* OR preschool* OR "pre school*" OR "school age*" OR "school-age*" OR adolescen* OR youth* OR "young pe*" OR teen* OR preadolescen*))) **AND** ((SU (computers OR video games)) **OR** (TI (Television OR TV OR "Screen viewing" OR "Screen time" OR "Screen exposure" OR Computer* OR "Video gam*" OR Sedentary OR Inactivity OR "E gam*" OR "e-gam*" OR Tablet* OR "Cell phone*" OR "Mobile Phone*" OR "Mobile us*" OR "Media time" OR "Media us*" OR "handheld device*" OR "game device*" OR "gaming device*" OR "game console*" OR "electronic media" OR smartphone* OR "smart phone*")) **OR** (AB (Television OR TV OR "Screen viewing" OR "Screen time" OR "Screen exposure" OR Computer* OR "Video gam*" OR Sedentary OR Inactivity OR "E gam*" OR "e-gam*" OR Tablet* OR "Cell phone*" OR "Mobile Phone*" OR "Mobile us*" OR "Media time" OR "Media us*" OR "handheld device*" OR "game device*" OR "gaming device*" OR "game console*" OR "electronic media" OR smartphone* OR "smart phone*")) **OR** (KW (Television OR TV OR "Screen viewing" OR "Screen time" OR "Screen exposure" OR Computer* OR "Video gam*" OR Sedentary OR Inactivity OR "E gam*" OR "e-gam*" OR Tablet* OR "Cell phone*" OR "Mobile Phone*" OR "Mobile us*" OR "Media time" OR "Media us*" OR "handheld device*" OR "game device*" OR "gaming device*" OR "game console*" OR "electronic media" OR smartphone* OR "smart phone*"))) **AND** (TI(Review OR "meta-analysis" OR "meta analysis" OR "meta-regression" OR "meta regression" OR synthesis OR "meta-synthesis" OR "meta synthesis"))

Version 1= as above

Version 2 = delete terms following final "AND", limit results "Review" after search

Embase Search Strategy

(child or pediatrics or adolescent or "minor (person)").sh. **OR** (boy* or girl* or kindergarten or paediatric or pediatric or infan* or baby or babies or toddler* or young child* or child or early childhood or early

years or pre-school* or preschool* or pre school* or school age* or school-age* or adolescen* or youth* or young pe* or teen* or preadolescen*).ti,ab,kw.

AND

(television or computer or video game or sedentary lifestyle or smartphone or mobile phone or television viewing).sh. **OR** (Television or TV or Screen viewing or Screen time or Screen exposure or Computer* or Video gam* or Sedentary or Inactivity or E gam* or e-gam* or Tablet* or Cell phone* or Mobile Phone* or Mobile us* or Media time or Media us* or handheld device* or game device* or gaming device* or game console* or gaming console* or electronic media or smartphone* or smart phone*).ti,ab,kw.

AND

(Review or meta?analysis or meta?regression or synthesis or meta?synthesis).ti. **OR** (review).pt.

Note: Run each block of searches separately and then combine with AND afterwards. A single, combined search generates an error message.

Cochrane Search Strategy

((minor* OR "school age population" OR boy* OR child* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR "young child*" OR "early childhood" OR "early years" OR pre-school* OR preschool* OR pre school* OR school age* OR school-age* OR toddler* OR adolescen* OR youth* OR young pe* OR teen* OR preadolescen*):ti,ab,kw **OR** MESH(child OR minors OR school age population OR pediatrics OR adolescent)) **AND** ((television OR computers OR "video games" OR "sedentary lifestyle" OR smartphone OR "cell phones" OR TV OR "Screen viewing" OR "Screen time" OR "Screen exposure" OR Computer* OR "Video gam*" OR "Sedentary" OR Inactivity OR "E gam*" OR e-gam* OR Tablet* OR "Cell phone*" OR "Mobile Phone*" OR "Mobile us*" OR "Media time" OR "Media us*" OR "handheld device*" OR "game device*" OR "gaming device*" OR "game console*" OR "gaming console*" OR "electronic media" OR smartphone* OR "smart phone*"):ti,ab,kw **OR** MESH (television OR computers OR video games OR sedentary lifestyle OR smartphone OR cell phones OR computers, handheld)) **AND** ((Review OR "meta analysis" OR "meta regression" OR synthesis OR "meta synthesis"):ti)

Version 1: as above

Version 2: Delete terms after final 'AND' and restrict results to reviews using Cochrane's tagging of studies.

Scopus Search Strategy

Version 1:

(TITLE-ABS-KEY(minor* OR "school age population" OR boy* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child*" OR child* OR "early childhood" OR "early years" OR pre-school* OR preschool* OR pre school* OR school age* OR "school-age*" OR adolescen* OR youth* OR "young pe*" OR teen* OR preadolescen*)) **AND** (TITLE-ABS-KEY(television OR computers OR "video games" OR "sedentary lifestyle" OR smartphone OR "cell phones" OR TV OR "Screen viewing" OR "Screen time" OR "Screen exposure" OR Computer* OR "Video gam*" OR "Sedentary" OR Inactivity OR "E gam*" OR e-gam* OR Tablet* OR "Cell phone*" OR "Mobile Phone*" OR "Mobile us*" OR "Media time" OR "Media us*" OR "handheld device*" OR "game device*" OR "gaming device*" OR "game console*" OR "gaming console*" OR "electronic media" OR smartphone* OR "smart phone*")) **AND** (TITLE(Review OR "meta analysis" OR "meta-analysis" OR "meta-regression" OR "meta regression" OR synthesis OR "meta synthesis" OR "meta-synthesis"))

Version 2:

(TITLE-ABS-KEY (minor* OR "school age population" OR boy* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR "young child*" OR child* OR "early childhood" OR "early years" OR pre-school* OR preschool* OR pre AND school* OR school AND age* OR "school-age*" OR adolescen* OR youth* OR "young pe*" OR teen* OR preadolescen*)) **AND** (TITLE-ABS-KEY (television OR computers OR "video games" OR "sedentary lifestyle" OR smartphone OR "cell phones" OR tv OR "Screen viewing" OR "Screen time" OR "Screen exposure" OR computer* OR "Video gam*" OR "Sedentary" OR inactivity OR "E gam*" OR e-gam* OR tablet* OR "Cell phone*" OR "Mobile Phone*" OR "Mobile us*" OR "Media time" OR "Media us*" OR "handheld device*" OR "game device*" OR "gaming device*" OR "game console*" OR "gaming console*" OR "electronic media" OR smartphone* OR "smart phone*")) **AND** (LIMIT-TO (DOCTYPE , "re"))

Web of Science Search Strategy

(TS= ("boy*" OR "girl*" OR "kindergarten" OR "paediatric" OR "pediatric" OR "infan*" OR "baby" OR "babies" OR "toddler*" OR "young child*" OR "child*" OR "early childhood" OR "early years" OR "pre-school*" OR "preschool*" OR "pre school*" OR "school age*" OR "school-age*" OR "adolescen*" OR "youth*" OR "young pe*" OR "teen*" OR "pre#adolescen*")) **AND** (TS= ("Television" OR "TV" OR "Screen viewing" OR "Screen time" OR "Screen exposure" OR "Computer*" OR "Video gam*" OR "Sedentary" OR "Inactivity" OR "E gam*" OR "e-gam*" OR "Tablet*" OR "Cell phone*" OR "Mobile Phone*" OR "Mobile us*" OR "Media time" OR "Media us*" OR "handheld device*" OR "game device*" OR "gaming device*" OR "game console*" OR "gaming console*" OR "electronic media" OR "smartphone*" OR "smart phone*")) **AND** (TI= ("Review" OR "systematic review" OR "meta-analysis" OR "meta analysis" OR "meta-regression" OR "meta-regression" OR "synthesis" OR "meta-synthesis" OR "meta synthesis"))

ProQuest Social Science Premium Collection Search Strategy

((su(Children OR babies OR boys OR girls OR preschool children OR teenagers OR adolescents OR pediatrics)) **OR** (ab(boy* OR child* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR young child* OR early childhood OR early years OR pre-school* OR preschool* OR school age* OR school-age* OR adolescen* OR youth* OR young pe* OR teen* OR pre-adolescen*)) **OR** (ti(boy* OR child* OR girl* OR kindergarten OR paediatric OR pediatric OR infan* OR baby OR babies OR toddler* OR young child* OR early childhood OR early years OR pre-school* OR preschool* OR school age* OR school-age* OR adolescen* OR youth* OR young pe* OR teen* OR pre-adolescen*))) **AND** ((SU(television OR computers OR video games OR mobile phone)) **OR** (ab(Television OR TV OR Screen viewing OR Screen time OR Screen exposure OR Computer* OR Video gam* OR Sedentary OR Inactivity OR E gam* OR e-gam* OR Tablet* OR Cell phone* OR Mobile Phone* OR Mobile us* OR Media time OR Media us* OR handheld device* OR game device* OR gaming device* OR game console* OR gaming console* OR electronic media OR smartphone* OR smart phone*)) **OR** (ti(Television OR TV OR Screen viewing OR Screen time OR Screen exposure OR Computer* OR Video gam* OR Sedentary OR Inactivity OR E gam* OR e-gam* OR Tablet* OR Cell phone* OR Mobile Phone* OR Mobile us* OR Media time OR Media us* OR handheld device* OR game device* OR gaming device* OR game console* OR gaming console* OR electronic media OR smartphone* OR smart phone*))) **AND** (TI(review OR meta-analysis OR meta-regression OR synthesis OR meta-synthesis OR meta analysis OR meta regression OR meta synthesis))

ERIC Search Strategy

((SU(child) OR SU(youth) OR SU(minor) OR SU(adolescent) OR SU(school) OR SU(pediatrics)) **OR** (AB, TI(minor*) OR AB, TI("school age population") OR AB, TI(boy*) OR AB, TI(child*) OR AB, TI(girl*) OR AB, TI(kindergarten) OR AB, TI(paediatric) OR AB, TI(pediatric) OR AB, TI(infan*) OR AB, TI(baby) OR AB, TI(babies) OR AB, TI(toddler*) OR AB, TI("young child*") OR AB, TI("early childhood") OR AB, TI("early years") OR AB, TI(pre-school*) OR AB, TI(preschool*) OR AB, TI("pre school*") OR AB, TI("school age*") OR AB, TI(school-age*) OR AB, TI(adolescen*) OR AB, TI(youth*) OR AB, TI("young pe*") OR AB, TI(teen*) OR AB, TI(preadolescen*))) **AND** ((SU(television) OR SU(computers) OR SU(video games) OR SU(sedentary lifestyle) OR SU(cell phone) OR SU(mobile phone)) **OR** (AB, TI(television) OR AB, TI(computers) OR AB, TI("video games") OR AB, TI("sedentary lifestyle") OR AB, TI(smartphone) OR AB, TI("cell phones") OR AB, TI(TV) OR AB, TI("Screen viewing") OR AB, TI("Screen time") OR AB, TI("Screen exposure") OR AB, TI(Computer*) OR AB, TI("Video gam*") OR AB, TI("Sedentary") OR AB, TI(Inactivity) OR AB, TI("E gam*") OR AB, TI(e-gam*) OR AB, TI(Tablet*) OR AB, TI("Cell phone*") OR AB, TI("Mobile Phone*") OR AB, TI("Mobile us*") OR AB, TI("Media time") OR AB, TI("Media us*") OR AB, TI("handheld device*") OR AB, TI("game device*") OR AB, TI("gaming device*") OR AB, TI("game console*") OR AB, TI("gaming console*") OR AB, TI("electronic media") OR AB, TI(smartphone*) OR AB, TI("smart phone*"))) **AND**

(TI(Review) OR TI("meta analysis") OR TI("meta regression") OR TI(synthesis) OR TI("meta synthesis") OR
TI("meta-analysis") OR TI("meta-regression") OR TI("meta-synthesis"))

Supplementary File 3 - Effect Size Codebook

Description: Automatically generated codebook for the dataset.

Codebook for the Complete Effects Data

Autogenerated data summary from dataReporter

2023-06-13 14:30:45.387615

Data report overview

The dataset examined has the following dimensions:

Feature	Result
Number of observations	452
Number of variables	32

Variable list

author_year

First author and publication year of meta-analysis.

Feature	Result
Variable type	character
Number of missing obs.	0 (0 %)
Number of unique values	134
Mode	"Oh, 2022"

outcome_category

Category the outcome belongs to.

Feature	Result
Variable type	character
Number of missing obs.	1 (0.22 %)
Number of unique values	4
Mode	"education"

plain_language_outcome

Specific outcome for the effect.

Feature	Result
Variable type	character
Number of missing obs.	0 (0 %)
Number of unique values	140
Mode	"Learning: General"

plain_language_exposure

Specific exposure for the effect.

Feature	Result
Variable type	character
Number of missing obs.	0 (0 %)
Number of unique values	93
Mode	"Screen use: General"

age_group

Broad age group of the participants, if specified.

Feature	Result
Variable type	character
Number of missing obs.	0 (0 %)
Number of unique values	4
Mode	"Mixed"

original_effect_size_metric

Type of effect size original_effect_size refers to.

Feature	Result
Variable type	character
Number of missing obs.	6 (1.33 %)
Number of unique values	7
Mode	"d"

original_effect_size

Effect size reported in the original meta-analysis.

Feature	Result
Variable type	numeric
Number of missing obs.	0 (0 %)
Number of unique values	286
Median	0.22
1st and 3rd quartiles	0.01; 0.68
Min. and max.	-788.59; 1185

original_cilb

Lower bound for the 95% confidence interval of the reported effect size.

Feature	Result
Variable type	numeric
Number of missing obs.	19 (4.2 %)
Number of unique values	265
Median	0.06
1st and 3rd quartiles	-0.15; 0.35
Min. and max.	-2146.87; 303

original_ciub

Upper bound for the 95% confidence interval of the reported effect size.

Feature	Result
Variable type	numeric
Number of missing obs.	19 (4.2 %)
Number of unique values	290
Median	0.44
1st and 3rd quartiles	0.12; 1.2
Min. and max.	-5.68; 2068

original_k

Number of studies reported as contributing to the reported effect size.

Feature	Result
Variable type	numeric

Feature	Result
Number of missing obs.	14 (3.1 %)
Number of unique values	52
Median	7
1st and 3rd quartiles	4; 12.75
Min. and max.	1; 274

original_n

Number of participants reported as contributing to the reported effect size.

Feature	Result
Variable type	numeric
Number of missing obs.	0 (0 %)
Number of unique values	422
Median	1857.5
1st and 3rd quartiles	643.75; 7388.5
Min. and max.	3; 527696

original_i2

Reported heterogeneity (as I-Squared) for the reported effect size.

Feature	Result
Variable type	numeric
Number of missing obs.	157 (34.73 %)
Number of unique values	198
Median	67.75
1st and 3rd quartiles	24.7; 82.9
Min. and max.	0; 99.8

converted_r

Effect size as converted to Pearson's r (where possible).

Feature	Result
Variable type	numeric
Number of missing obs.	197 (43.58 %)
Number of unique values	179
Median	0.1
1st and 3rd quartiles	-0.02; 0.2
Min. and max.	-0.26; 0.82

converted_cilb

Lower bound for the 95% confidence interval of the converted effect size.

Feature	Result
Variable type	numeric
Number of missing obs.	206 (45.58 %)
Number of unique values	181
Median	0.02
1st and 3rd quartiles	-0.11; 0.09
Min. and max.	-0.54; 0.76

converted_ciub

Upper bound for the 95% confidence interval of the converted effect size.

Feature	Result
Variable type	numeric
Number of missing obs.	206 (45.58 %)
Number of unique values	196
Median	0.19
1st and 3rd quartiles	0.06; 0.3
Min. and max.	-0.2; 0.87

reanalysis_estimate

Effect size from the reanalysis of the study-level data (where possible).

Feature	Result
Variable type	numeric
Number of missing obs.	204 (45.13 %)
Number of unique values	244
Median	0.08
1st and 3rd quartiles	-0.04; 0.18
Min. and max.	-0.47; 0.61

reanalysis_cilb

Lower bound for the 95% confidence interval of the reanalysed effect size.

Feature	Result
Variable type	numeric

Feature	Result
Number of missing obs.	204 (45.13 %)
Number of unique values	244
Median	-0.01
1st and 3rd quartiles	-0.16; 0.07
Min. and max.	-0.67; 0.45

reanalysis_ciub

Upper bound for the 95% confidence interval of the reanalysed effect size.

Feature	Result
Variable type	numeric
Number of missing obs.	204 (45.13 %)
Number of unique values	244
Median	0.16
1st and 3rd quartiles	0.05; 0.29
Min. and max.	-0.35; 0.79

reanalysis_cilb999

Lower bound for the 99.9% confidence interval of the reanalysed effect size.

Feature	Result
Variable type	numeric
Number of missing obs.	204 (45.13 %)
Number of unique values	244
Median	-0.1
1st and 3rd quartiles	-0.22; 0.02
Min. and max.	-1; 0.35

reanalysis_ciub999

Upper bound for the 99.9% confidence interval of the reanalysed effect size.

Feature	Result
Variable type	numeric
Number of missing obs.	204 (45.13 %)
Number of unique values	244
Median	0.22
1st and 3rd quartiles	0.1; 0.39
Min. and max.	-0.27; 1

reanalysis_k

Number of studies contributing to the reanalysed effect size.

Feature	Result
Variable type	integer
Number of missing obs.	204 (45.13 %)
Number of unique values	48
Median	7
1st and 3rd quartiles	4; 13
Min. and max.	1; 122

reanalysis_n

Number of participants contributing to the reanalysed effect size.

Feature	Result
Variable type	numeric
Number of missing obs.	204 (45.13 %)
Number of unique values	234
Median	1842
1st and 3rd quartiles	690.25; 5658.75
Min. and max.	26; 527696

reanalysis_i2

Heterogeneity (as I-Squared) for the reanalysed effect size.

Feature	Result
Variable type	numeric
Number of missing obs.	204 (45.13 %)
Number of unique values	199
Median	74.4
1st and 3rd quartiles	27.49; 88.44
Min. and max.	0; 99.51

reanalysis_eggers_p

P-value for the Egger's test for publication bias.

Feature	Result
Variable type	numeric

Feature	Result
Number of missing obs.	365 (80.75 %)
Number of unique values	86
Median	0.23
1st and 3rd quartiles	0.03; 0.5
Min. and max.	0; 0.98

reanalysis_eggers_cilb

Lower bound for the 95% confidence interval for the Egger's test for publication bias.

Feature	Result
Variable type	numeric
Number of missing obs.	365 (80.75 %)
Number of unique values	86
Median	-0.04
1st and 3rd quartiles	-0.19; 0.11
Min. and max.	-2.05; 0.65

reanalysis_eggers_ciub

Upper bound for the 95% confidence interval for the Egger's test for publication bias.

Feature	Result
Variable type	numeric
Number of missing obs.	365 (80.75 %)
Number of unique values	86
Median	0.29
1st and 3rd quartiles	0.11; 0.64
Min. and max.	-0.96; 1.56

reanalysis_tes_obsr

Number of observed significant tests (from Test of Excess Significance).

Feature	Result
Variable type	integer
Number of missing obs.	204 (45.13 %)
Number of unique values	32
Median	3
1st and 3rd quartiles	1; 6
Min. and max.	0; 110

reanalysis_tes_expect

Number of expected significant tests (from Test of Excess Significance).

Feature	Result
Variable type	numeric
Number of missing obs.	204 (45.13 %)
Number of unique values	244
Median	3.21
1st and 3rd quartiles	1.63; 6.78
Min. and max.	0.05; 108.26

reanalysis_tes_ratio

Ratio of observed to expected significant tests (from Test of Excess Significance).

Feature	Result
Variable type	numeric
Number of missing obs.	204 (45.13 %)
Number of unique values	219
Median	0.91
1st and 3rd quartiles	0.57; 1.09
Min. and max.	0; 2.9

reanalysis_tes_p

P-value for the Test of Excess Significance.

Feature	Result
Variable type	numeric
Number of missing obs.	204 (45.13 %)
Number of unique values	222
Median	0.8
1st and 3rd quartiles	0.58; 0.95
Min. and max.	0.01; 1

reanalysis_tes_power

Power for each of the tests (from the Test of Excess Significance).

Feature	Result
Variable type	character

Feature	Result
Number of missing obs.	204 (45.13 %)
Number of unique values	244
Mode	"0.793; 0.52; 0.463"

reanalysis_tes_theta

Value of theta used to compute the tests (from the Test of Excess Significance).

Feature	Result
Variable type	numeric
Number of missing obs.	204 (45.13 %)
Number of unique values	244
Median	0.08
1st and 3rd quartiles	-0.04; 0.18
Min. and max.	-0.47; 0.61

Report generation information:

- Created by: Taren Sanders (username: taren).
- Report creation time: Tue Jun 13 2023 14:30:45
- Report was run from directory: /home/taren/GitHub/screen_umbrella
- dataReporter v1.0.2 [Pkg: 2021-11-11 from CRAN (R 4.3.0)]
- R version 4.3.0 (2023-04-21).
- Platform: x86_64-pc-linux-gnu (64-bit)(Australia/Sydney).
- Function call:

```
dataReporter::makeDataReport(data = out_effects, output = "pdf", mode = "summarize", smartNum = FALSE, file = "supplementary_files/codebook.Rmd", replace = TRUE, openResult = FALSE, checks = list(character = "showAllFactorLevels", factor = "showAllFactorLevels", labelled = "showAllFactorLevels", haven_labelled = "showAllFactorLevels", numeric = NULL, integer = NULL, logical = NULL, Date = NULL), listChecks = FALSE, maxProbVals = Inf, addSummaryTable = FALSE, codebook = TRUE, reportTitle = "Codebook for the Complete Effects Data")
```

Supplementary File 6 - Education Outcomes

Description: Additional education outcomes which did not meet certainty criteria.

Associations Between Exposures and Education Outcomes

Forest plot showing effect sizes and 95% CIs for various outcomes across different studies. The x-axis ranges from -0.8 to 1.0.

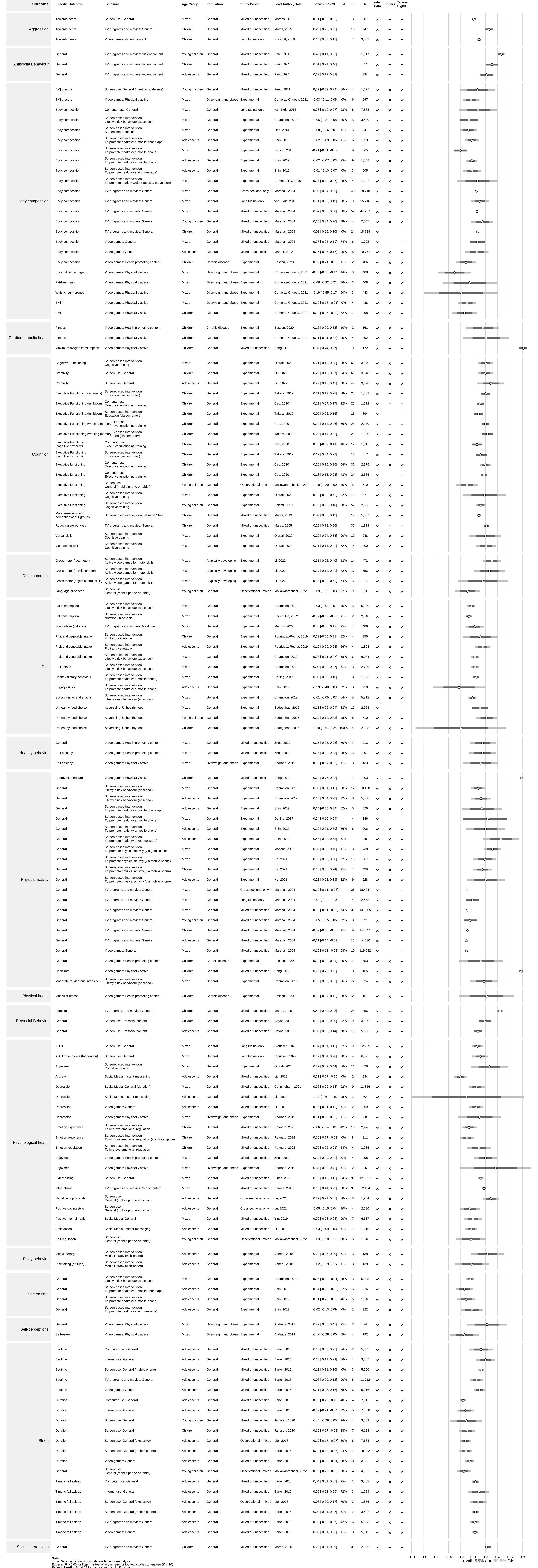
Outcome	Specific Outcome	Exposure	Age Group	Population	Study Design	Lead Author, Date	r with 95% CI	I ²	K	N	Indiv. Data	Eggers	Excess Signif.	
Learning	General	Screen-based intervention: Education (via touch screen)	Children	Autism	Experimental	Aspiranti, 2020	0.35 [NA, NA]	0%	3	33	x	-	-	
	General	Screen-based intervention: With digital characters	Children	General	Experimental	Schroeder, 2013	0.28 [0.18, 0.37]	0%	5	348	v	x	v	
	General	Video games: Educational (with competition)	Children	General	Experimental	Chen, 2020	0.32 [0.10, 0.50]	8	724	x	-	-		
	General	Video games: Educational (with competition)	Adolescents	General	Experimental	Chen, 2020	0.21 [0.11, 0.28]	8	740	x	-	-		
	General	Video games: Educational (with instructional support)	Adolescents	General	Experimental	Wouters, 2013	0.07 [-0.07, 0.20]	60%	13	471	v	v	v	
	General	Video games: Virtual reality (Educational)	Mixed	General	Experimental	Merchant, 2014	0.25 [0.12, 0.36]	90%	13	3,081	x	-	-	
	Literacy and numeracy	Screen use: Educational apps	Children	General	Experimental	Kim, 2021	0.10 [0.07, 0.13]	0%	36	5,447	v	x	v	
	Literacy and numeracy	Screen-based intervention: Sesame Street	Children	General	Mixed or unspecified	Mares, 2013	0.14 [0.08, 0.20]	15	7,604	x	-	-		
	Physical and social environment	Screen-based intervention: Sesame Street	Children	General	Mixed or unspecified	Mares, 2013	0.17 [0.09, 0.24]	13	7,797	x	-	-		
	Programming skills	Screen-based intervention: Education (programming)	Children	General	Experimental	Scherer, 2020	0.43 [0.21, 0.65]	86%	6	317	v	x	v	
	Programming skills	Screen-based intervention: Education (programming)	Adolescents	General	Experimental	Scherer, 2020	0.32 [0.12, 0.52]	88%	4	767	v	x	v	
	School attendance problems	Internet use: Cyberbullying victimization	Adolescents	General	Cross-sectional only	Gardella, 2017	0.20 [0.18, 0.21]	0%	9	25,242	v	x	v	
	Second language	Screen use: General (mobile phone for language learning)	Children	General	Experimental	Cho, 2018	0.26 [0.13, 0.38]	80%	7	1,192	v	x	v	
	Second language	Screen use: General (mobile phone for language learning)	Adolescents	General	Experimental	Cho, 2018	0.20 [0.13, 0.53]	84%	3	201	v	x	v	
	Second language vocabulary	Screen-based intervention: English as foreign language	Children	General	Experimental	Hao, 2021	0.22 [-0.36, 0.79]	94%	3	147	v	x	v	
	Learning	Second language vocabulary	Screen-based intervention: English as foreign language	Adolescents	General	Experimental	Hao, 2021	0.42 [0.25, 0.60]	90%	12	569	v	x	v
	Behavior	Video games: Educational (with competition)	Children	General	Mixed or unspecified	Arztmann, 2022	0.43 [0.28, 0.57]	70%	5	439	v	x	v	
	Computational thinking	Computer use: Programming exercises	Children	General	Experimental	Li, 2022	0.19 [0.02, 0.36]	78%	4	682	v	x	v	
	Computational thinking	Computer use: Programming exercises	Adolescents	General	Experimental	Li, 2022	0.33 [0.21, 0.45]	54%	8	493	v	x	v	
	Educational achievement problems	Internet use: Cyberbullying victimization	Adolescents	General	Cross-sectional only	Gardella, 2017	0.15 [0.13, 0.17]	0%	7	7,768	v	x	v	
	General	Screen use: General (in schools)	Children	General	Experimental	Chauhan, 2017	0.26 [0.23, 0.30]	86%	122	32,096	x	-	-	
	General	Screen use: General (mobile phone)	Mixed	General	Mixed or unspecified	Kates, 2018	-0.15 [-0.24, -0.05]	100%	8	179,186	v	x	v	
	General	Screen use: Video (vs face-to-face)	Young children	General	Experimental	Strouse, 2021	-0.26 [-0.32, -0.21]	76%	122	3,436	v	x	v	
	General	Screen use: Virtual reality simulations (Educational)	Mixed	General	Experimental	Merchant, 2014	0.20 [0.09, 0.30]	86%	29	2,553	x	-	-	
	General	Screen use: Virtual reality worlds (Educational)	Mixed	General	Experimental	Merchant, 2014	0.18 [0.14, 0.21]	78%	25	2,798	x	-	-	
General	Screen-based intervention: Sesame Street	Children	General	Cross-sectional only	Mares, 2013	0.22 [0.10, 0.34]	3	615	x	-	-			
General	Screen-based intervention: Sesame Street	Children	General	Longitudinal only	Mares, 2013	0.13 [0.08, 0.18]	21	9,981	x	-	-			
General	Screen-based intervention: Sesame Street	Children	General	Mixed or unspecified	Mares, 2013	0.14 [0.10, 0.19]	24	10,596	x	-	-			
General	Screen-based intervention: Augmented reality (in schools)	Children	General	Experimental	Garzón, 2019	0.33 [0.29, 0.36]	94%	19	1,207	x	-	-		
General	Screen-based intervention: Augmented reality (in schools)	Adolescents	General	Experimental	Garzón, 2019	0.27 [0.22, 0.31]	96%	12	1,053	x	-	-		
General	Screen-based intervention: Education (via computer)	Children	General	Mixed or unspecified	Liao, 2008	0.22 [0.15, 0.28]	48	5,121	x	-	-			
Literacy	Decoding	e-Books: General	Children	General	Mixed or unspecified	Zucker, 2009	0.01 [-0.17, 0.20]	0%	2	109	v	x	v	
	General	Screen use: General	Mixed	General	Cross-sectional only	Madigan, 2020	-0.14 [-0.21, -0.08]	24	8,868	x	-	-		
	General	Screen use: General	Mixed	General	Longitudinal only	Madigan, 2020	-0.12 [-0.16, -0.07]	14	9,450	x	-	-		
	General	Screen use: General (coviewing)	Mixed	General	Cross-sectional only	Madigan, 2020	0.19 [0.05, 0.33]	8	3,262	x	-	-		
	General	Screen use: General (coviewing)	Mixed	General	Longitudinal only	Madigan, 2020	0.08 [0.01, 0.15]	4	2,821	x	-	-		
	General	Screen-based intervention: Literacy	Mixed	Poor readers	Experimental	McArthur, 2018	0.16 [-0.01, 0.33]	54%	6	294	v	x	v	
	General	Screen-based intervention: Education (general)	Mixed	General	Cross-sectional only	Madigan, 2020	0.14 [-0.04, 0.31]	90%	7	1,228	v	x	v	
	General	Screen-based intervention: Education (general)	Mixed	General	Longitudinal only	Madigan, 2020	0.10 [0.00, 0.19]	6	727	x	-	-		
	General	Screen-based intervention: Literacy videos	Children	General	Mixed or unspecified	Hurwitz, 2018	0.10 [0.07, 0.13]	0%	45	24,624	x	-	-	
	General	TV programs and movies: Coviewing	Mixed	General	Observational - mixed	Madigan, 2020	0.11 [0.01, 0.20]	9	3,376	x	-	-		
	General	TV programs and movies: General	Mixed	General	Cross-sectional only	Adelantado-Renau, 2019	-0.09 [-0.18, 0.00]	96%	8	16,761	v	x	v	
	General	TV programs and movies: General	Mixed	General	Observational - mixed	Madigan, 2020	-0.15 [-0.21, -0.09]	26	12,337	x	-	-		
	Literacy	TV programs and movies: General (in background)	Mixed	General	Observational - mixed	Madigan, 2020	-0.19 [-0.31, -0.06]	70%	5	2,792	v	x	v	
	Listening comprehension	Screen-based intervention: Literacy (Abracadabra; in schools)	Children	General	Experimental	Abrami, 2020	0.11 [-0.01, 0.23]	92%	8	3,715	v	x	v	
	Phonics	Screen-based intervention: Literacy (phonics; via computer)	Mixed	Poor readers	Experimental	McArthur, 2012	0.08 [-0.11, 0.27]	14%	4	124	v	x	v	
	Phonemic awareness	Screen-based intervention: Literacy (Abracadabra; in schools)	Children	General	Experimental	Abrami, 2020	0.16 [0.11, 0.22]	68%	10	5,124	v	x	v	
	Pronunciation	Screen-based intervention: Pronunciation	Mixed	General	Experimental	Hassan-Saleh, 2019	0.22 [NA, NA]	82%	6	302	x	-	-	
	Reading	Screen-based intervention: Reading (in schools)	Mixed	General	Experimental	Cheung, 2012	0.08 [0.06, 0.10]	78%	84	60,553	x	-	-	
Reading comprehension	Screen-based intervention: Literacy (Abracadabra; in schools)	Children	General	Experimental	Abrami, 2020	0.10 [0.03, 0.17]	82%	9	5,773	v	x	v		
Reading comprehension	e-Books: General	Children	General	Mixed or unspecified	Zucker, 2009	0.23 [0.10, 0.35]	44%	7	401	v	x	v		
Reading fluency	Screen-based intervention: Literacy	Children	General	Mixed or unspecified	Blok, 2002	0.13 [0.07, 0.19]	58%	50	3,083	v	x	v		
Reading fluency	Screen-based intervention: Literacy (Abracadabra; in schools)	Children	General	Experimental	Abrami, 2020	0.06 [-0.06, 0.17]	74%	5	1,745	v	x	v		
Reading performance	Screen use: Reading (vs paper)	Mixed	General	Experimental	Clinton, 2019	-0.11 [-0.26, 0.03]	76%	9	760	v	x	v		
Vocabulary knowledge	Screen-based intervention: Literacy (Abracadabra; in schools)	Children	General	Experimental	Abrami, 2020	0.04 [-0.07, 0.15]	94%	8	5,181	v	x	v		
Vocabulary learning	e-Books: General	Young children	General	Experimental	Furenes, 2021	0.14 [0.07, 0.20]	0%	18	871	v	v	v		
Writing	Screen-based intervention: Writing feedback	Children	General	Experimental	Graham, 2015	0.19 [0.08, 0.28]	0%	4	463	x	-	-		
Numeracy	General	Screen use: Educational apps	Children	General	Experimental	Kim, 2021	0.09 [0.06, 0.12]	0%	24	4,352	v	x	v	
	General	Screen-based intervention: Mathematics	Children	Dyscalculia	Experimental	Kucukalkan, 2019	0.29 [0.24, 0.34]	86%	31	2,290	x	-	-	
	General	Screen-based intervention: Cognitive training	Mixed	General	Experimental	Oldrati, 2020	0.15 [0.02, 0.29]	70%	11	693	v	v	v	
	General	Screen-based intervention: Dynamic geometry software	Mixed	General	Experimental	Chan, 2014	0.43 [0.29, 0.57]	92%	9	1,174	v	x	v	
	General	Screen-based intervention: Mathematics (in schools)	Mixed	General	Experimental	Cheung, 2013	0.07 [0.05, 0.09]	82%	73	56,891	v	x	v	
	General	Screen-based intervention: Mathematics (via computer in classrooms)	Children	Math difficulties	Experimental	Kroesbergen, 2003	0.28 [0.13, 0.43]	74%	11	848	v	v	v	
	General	TV programs and movies: General	Mixed	General	Cross-sectional only	Adelantado-Renau, 2019	-0.12 [-0.18, -0.07]	78%	7	14,115	v	x	v	
Mathematics	Screen-based intervention: Mathematics	Children	Math difficulties	Experimental	Benavides-Varela, 2020	0.26 [0.10, 0.41]	84%	13	982	v	v	v		
Science	General	Screen-based intervention: Science (in schools)	Children	General	Mixed or unspecified	Slavin, 2014	0.21 [0.15, 0.26]	6	2,384	x	-	-		

Note: Indiv. Data: Individual study data available for reanalysis.
Eggers: $P > 0.05$ for Egger's test of asymmetry, or too few studies to analyse ($K < 10$)
Excess Signif.: $P > 0.05$ for test for excess significance

Supplementary File 7 - Health-related Outcomes

Description: Additional health-related outcomes which did not meet certainty criteria.

Associations Between Exposures and Health-related Outcomes



Supplementary File 8 - Included Studies

Description: References for the included studies.

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Supplementary File 9 - Effect Characteristics

Description: Descriptive table for the included effects.

Effect Size Characteristics		
Characteristics of included and excluded effect sizes		
Variable	Effect Size Used Not Used, N = 197 ¹	Effect Size Used Used, N = 255
Review Year		
1982	0 (0%)	1 (0.4%)
1994	0 (0%)	3 (1.2%)
2002	0 (0%)	1 (0.4%)
2003	0 (0%)	1 (0.4%)
2004	4 (2.0%)	13 (5.1%)
2005	0 (0%)	4 (1.6%)
2008	0 (0%)	1 (0.4%)
2009	0 (0%)	2 (0.8%)
2010	0 (0%)	2 (0.8%)
2011	3 (1.5%)	3 (1.2%)
2012	1 (0.5%)	2 (0.8%)
2013	4 (2.0%)	12 (4.7%)
2014	1 (0.5%)	7 (2.7%)
2015	8 (4.1%)	16 (6.3%)
2016	16 (8.1%)	9 (3.5%)
2017	10 (5.1%)	8 (3.1%)
2018	6 (3.0%)	16 (6.3%)
2019	38 (19%)	50 (20%)
2020	25 (13%)	49 (19%)
2021	28 (14%)	24 (9.4%)
2022	53 (27%)	31 (12%)
Outcome Category		
Education	41 (21%)	89 (35%)
Health Behaviour	55 (28%)	64 (25%)
Physical Health	62 (31%)	32 (13%)
Psychology	39 (20%)	69 (27%)
(missing)	0	1
Broad Outcome		
Aggression	0 (0%)	4 (1.6%)
Antisocial Behaviour	0 (0%)	3 (1.2%)
Body composition	45 (23%)	26 (10%)
Cardiometabolic health	4 (2.0%)	3 (1.2%)
Cognition	10 (5.1%)	21 (8.2%)
Developmental	0 (0%)	5 (2.0%)
Diet	17 (8.6%)	15 (5.9%)
Eye health	10 (5.1%)	0 (0%)
Healthy behavior	1 (0.5%)	4 (1.6%)
Learning	29 (15%)	44 (17%)
Literacy	10 (5.1%)	33 (13%)
Numeracy	2 (1.0%)	11 (4.3%)
Physical activity	18 (9.1%)	21 (8.2%)
Physical health	3 (1.5%)	1 (0.4%)
Prosocial Behavior	0 (0%)	3 (1.2%)
Psychological health	23 (12%)	26 (10%)
Risky behavior	10 (5.1%)	7 (2.7%)
Science	0 (0%)	1 (0.4%)
Screen time	3 (1.5%)	4 (1.6%)
Self-perceptions	1 (0.5%)	2 (0.8%)
Sleep	11 (5.6%)	20 (7.8%)
Social interactions	0 (0%)	1 (0.4%)
Broad Exposure		
Advertising	14 (7.1%)	5 (2.0%)
Computer use	9 (4.6%)	11 (4.3%)
e-Books	0 (0%)	5 (2.0%)
Internet use	1 (0.5%)	7 (2.7%)
Screen use	77 (39%)	48 (19%)
Screen-based intervention	56 (28%)	92 (36%)
Social Media	6 (3.0%)	10 (3.9%)
TV advertising	1 (0.5%)	0 (0%)
TV programs and movies	10 (5.1%)	32 (13%)
Video games	23 (12%)	45 (18%)
Number of Contributing Studies	5 (3, 9)	9 (5, 16)
(missing)	9	3
Pooled Sample Size	1,884 (665, 8,487)	2,053 (744, 5,990)
Age Group		
Adolescents	21 (11%)	57 (22%)
Children	47 (24%)	76 (30%)
Mixed	114 (58%)	102 (40%)
Young children	15 (7.6%)	20 (7.8%)
Sample Type		
Atypically developing	1 (0.5%)	3 (1.2%)
Autism	6 (3.0%)	1 (0.4%)
Chronic disease	1 (0.5%)	4 (1.6%)
Dyscalculia	0 (0%)	1 (0.4%)
General	184 (93%)	231 (91%)
Math difficulties	1 (0.5%)	2 (0.8%)
Overweight and obese	4 (2.0%)	10 (3.9%)
Poor readers	0 (0%)	3 (1.2%)
Study Design		
Cross-sectional only	4 (2.0%)	16 (6.3%)
Experimental	108 (55%)	130 (51%)
Longitudinal only	8 (4.1%)	12 (4.7%)
Mixed or unspecified	48 (24%)	81 (32%)
Observational - mixed	29 (15%)	16 (6.3%)
Study-level Data Available	150 (76%)	188 (74%)
Meets Statistical Certainty Criteria		
Meets Criteria	8 (4.1%)	44 (17%)
Unclear	189 (96%)	211 (83%)

¹ n (%); Median (IQR)