

## Table of Contents

- Page 2: Supplementary File 2 - Review characteristics
- Page 4: Supplementary File 3 - Effect Characteristics
- Page 10: Supplementary File 4 - Education Outcomes
- Page 12: Supplementary File 5 - Health-related Outcomes
- Page 14: Supplementary File 7 - Search Strategy
- Page 23: Supplementary File 9 - Included Studies
- Page 37: Supplementary File 10 - Effect Size Codebook

## Supplementary File 2 - Review characteristics

**Description:** Table of included meta-analyses and their characteristics.

Review characteristics for studies providing unique effects

First Author	Year	Design Restrictions	Sample Restrictions	Year Range Earliest - Latest	Sample Age Restrictions (Age+Range) <sup>1</sup>	Outcomes Assessed	Exposures Assessed
Abrami	2020	Include: Experimental designs	None specified	2009–2019	School-age Children (Early Primary, Elementary)	<ul style="list-style-type: none"> <li>Literacy: Reading comprehension</li> <li>Literacy: Phonics</li> <li>Phonemic awareness</li> <li>Reading comprehension</li> <li>Literacy: Reading fluency</li> <li>Vocabulary knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Literacy (Academics/in schools)</li> </ul>
Adelantado-Renau	2019	Include: Cross-sectional studies	None specified	1992–2019	Children; Adolescents (6.7-18.0)	<ul style="list-style-type: none"> <li>Learning: General</li> <li>Numeracy: General</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General</li> <li>Screen use: General and novel</li> <li>Video games: General</li> </ul>
Andrade	2019	Include: Interventions	Include: Overweight and obese	2010–2017	Children; Adolescents	<ul style="list-style-type: none"> <li>Health behavior: Self-efficacy</li> <li>Psychological health: Depression</li> <li>Psychological health: Enjoyment</li> <li>Self-perceptions: General</li> <li>Self-perceptions: Self-esteem</li> </ul>	<ul style="list-style-type: none"> <li>Video games: Physically active</li> </ul>
Arzmann	2022	None specified	None specified	2009–2020	School-age Children (Primary, Elementary, Middle School)	<ul style="list-style-type: none"> <li>Learning: Behavior: Learning Motivation</li> </ul>	<ul style="list-style-type: none"> <li>Video games: Educational (with competition)</li> </ul>
Aspiranti	2020	Include: Interventions	Include: Autism	2013–2015	School-age Children (Primary, Elementary)	<ul style="list-style-type: none"> <li>Learning: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Education (via touch screen)</li> </ul>
Bartel	2015	None	Exclude: Atypical population (except for delayed sleep phase disorder or insomnia)	2004–2014	Adolescents (12.2-17.7)	<ul style="list-style-type: none"> <li>Sleep: Bedtime duration</li> <li>Sleep: Time to fall asleep</li> </ul>	<ul style="list-style-type: none"> <li>Computer use: General</li> <li>Internet use: General</li> <li>Mobile phone: General</li> <li>TV programs and movies: General</li> <li>Video games: General</li> </ul>
Beck Silva	2022	Include: Randomised controlled trials and quasi-RCTs	Exclude: Any disease Mental disorders	1999–2019	Adolescents	<ul style="list-style-type: none"> <li>Diet: Fat consumption</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Nutrients (in schools)</li> </ul>
Benavides-Varela	2020	Include: Randomised controlled trials	Include: Math difficulties	2006–2018	Children	<ul style="list-style-type: none"> <li>Numeracy: Mathematics</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Mathematics</li> </ul>
Blok	2002	None	Include: Regular students, poor readers or dyslexics Exclude: Severe or multiple disabilities	1990–2000	All (6.4-11.6)	<ul style="list-style-type: none"> <li>Literacy: Reading fluency</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Literacy</li> </ul>
Bossen	2020	Include: Randomised controlled trials	Include: Chronic disease	2011–2018	Children (10.1-15.7)	<ul style="list-style-type: none"> <li>Body composition</li> <li>Health: Physical fitness</li> <li>Physical activity: General</li> <li>Physical activity: Muscular fitness</li> </ul>	<ul style="list-style-type: none"> <li>Video games: Health promoting content</li> </ul>
Boyland	2016	Include: Experimental	None specified	2004–2015	Children; Adolescents (6.0-10.4)	<ul style="list-style-type: none"> <li>Diet: Food intake</li> </ul>	<ul style="list-style-type: none"> <li>Advertising: Unhealthy food</li> </ul>
Byun	2018	Include: All quantitative designs	None specified	2006–2014	School-age Children	<ul style="list-style-type: none"> <li>Numeracy: General</li> </ul>	<ul style="list-style-type: none"> <li>Video games: Numeracy</li> </ul>
Cao	2020	Include: designs with control groups	Exclude: Brain damage	2002–2019	Children (3.4-14.8)	<ul style="list-style-type: none"> <li>Cognition: Executive functioning</li> <li>Cognition: Executive functioning (cognitive flexibility)</li> <li>Cognition: Executive Functioning (working memory)</li> </ul>	<ul style="list-style-type: none"> <li>Computer use: Executive functioning training</li> </ul>
Champion	2019	Include: Randomised controlled trials	None specified	2003–2017	School-age Children (0.1-15.9)	<ul style="list-style-type: none"> <li>Body composition</li> <li>Body composition: BMI</li> <li>Body composition: BMI z-score</li> <li>Body composition: Body fat percentage</li> <li>Body composition: Fat-free mass</li> <li>Body composition: Waist circumference</li> <li>Physical activity: General</li> <li>Risky behavior: Alcohol consumption</li> <li>Risky behavior: Smoking</li> <li>Screens time: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Lifestyle risk behaviour (at school)</li> </ul>
Chan	2014	Include: Experimental; Quasi-experimental	None specified	2002–2012	School-age Children	<ul style="list-style-type: none"> <li>Numeracy: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Dynamic geometry software</li> </ul>
Chauhan	2017	Include: pre-post designs with or without control group	None specified	2001–2016	School-age Children (Primary, Elementary)	<ul style="list-style-type: none"> <li>Learning: General</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General (In schools)</li> </ul>
Chen	2020	Include: Experimental designs	None specified	2008–2019	All	<ul style="list-style-type: none"> <li>Learning: General</li> </ul>	<ul style="list-style-type: none"> <li>Video games: Education (with competition)</li> </ul>
Cheung	2012	Include: Randomised controlled trials	None specified	1982–2010	School-age Children	<ul style="list-style-type: none"> <li>Literacy: Reading</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Reading (in schools)</li> </ul>
Cheung	2013	Include: Experimental; Quasi-experimental	None specified	1980–2010	School-age Children	<ul style="list-style-type: none"> <li>Numeracy: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Mathematics (in schools)</li> </ul>
Cho	2018	Include: experimental designs with control group	None specified	2008–2013	All	<ul style="list-style-type: none"> <li>Learning: Second language</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General (mobile phone for language learning)</li> </ul>
Claussen	2022	Include: Longitudinal; Retrospective	None specified	2004–2013	All	<ul style="list-style-type: none"> <li>Psychological health: ADHD</li> <li>Psychological health: ADHD medication (attention)</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General</li> </ul>
Clinton	2019	Include: randomised experimental designs	Exclude: Disabilities	2011–2016	All	<ul style="list-style-type: none"> <li>Literacy: Reading performance</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: Reading (vs paper)</li> </ul>
Comeras-Chueca	2021	include: randomized and non-randomized controlled trials (control group with no intervention or traditional exercise intervention)	Exclude: Disabilities, diseases or disorders, overweight or obese	2006–2019	All (6.5-11.6)	<ul style="list-style-type: none"> <li>Body composition: BMI</li> <li>Body composition: BMI z-score</li> <li>Body composition: Body fat percentage</li> <li>Body composition: Fat-free mass</li> <li>Body composition: Waist circumference</li> </ul>	<ul style="list-style-type: none"> <li>Video games: Physically active</li> </ul>
Comeras-Chueca	2021	Includes: randomized and non-randomized controlled with control group with no intervention or traditional exercise intervention	Include: Overweight and obese Exclude: Participants with disabilities, diseases or disorders other than obesity	2010–2020	All (9.0-14.0)	<ul style="list-style-type: none"> <li>Body composition</li> <li>Body composition: BMI</li> <li>Body composition: BMI z-score</li> <li>Body composition: Body fat percentage</li> <li>Body composition: Fat-free mass</li> <li>Body composition: Waist circumference</li> </ul>	<ul style="list-style-type: none"> <li>Video games: Physically active</li> </ul>
Coyne	2018	None	None specified	1975–2017	Children; Adolescents	<ul style="list-style-type: none"> <li>Prosocial Behavior: General</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: Prosocial content</li> </ul>
Cunningham	2021	Include: Quantitative designs	None specified	2014–2018	All (1.1-16.8)	<ul style="list-style-type: none"> <li>Psychological health: Depression</li> </ul>	<ul style="list-style-type: none"> <li>Social Media: General (duration)</li> </ul>
Cushing	2010	Include: All quantitative designs; Experimental	None specified	1989–2009	Children; Adolescents	<ul style="list-style-type: none"> <li>Healthy behavior: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Health behaviours</li> </ul>
Daning	2017	Include: Intervention	None specified	2006–2016	Children; Adolescents (9.7-16.0)	<ul style="list-style-type: none"> <li>Body composition</li> <li>Diet: Healthy behaviour</li> <li>Physical activity: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: To promote health (via mobile phone)</li> </ul>
Eirich	2022	Include: experimental or observational	Exclude: Atypically developing	1978–2021	Children (0.5-11.0)	<ul style="list-style-type: none"> <li>Psychological health: Externalizing</li> <li>Psychological health: Internalizing</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General</li> </ul>
Feng	2021	Include: Quantitative designs	Include: Healthy children	2017–2019	Early childhood: Preschool	<ul style="list-style-type: none"> <li>Body composition: BMI z-score</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General (meeting guidelines)</li> </ul>
Ferguson	2017	None	None specified	2005–2017	Children; Adolescents	<ul style="list-style-type: none"> <li>Risky behavior: Sexual activity</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: Sexual content</li> </ul>
Ferguson	2020	Include: Experimental, correlational, or longitudinal	None specified	2009–2013	All (7.8-17.5)	<ul style="list-style-type: none"> <li>Aggression: General</li> </ul>	<ul style="list-style-type: none"> <li>Video games: Violent content</li> </ul>
Folkvord	2018	Include: Interventions	None specified	2007–2018	Children; Adolescents	<ul style="list-style-type: none"> <li>Diet: Food intake (calories)</li> </ul>	<ul style="list-style-type: none"> <li>Advertising: Overgames</li> </ul>
Furunes	2021	Include: experimental or quasi-experimental	Exclude: Cochlear implants or autism	2009–2019	Early childhood: Preschool-School-age Children (Early Primary, Elementary)	<ul style="list-style-type: none"> <li>Literacy: Reading comprehension</li> <li>Literacy: Vocabulary learning</li> </ul>	<ul style="list-style-type: none"> <li>e-Books: General</li> </ul>
Gardella	2017	Include: Cross-sectional	None specified	2006–2014	Adolescents (12.5-16.2)	<ul style="list-style-type: none"> <li>Learning: Educational attainment problems</li> <li>Learning: School attendance problems</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Cyberbullying victimization</li> </ul>
Garzón	2019	Include: Experimental with control group	None specified	NA	All	<ul style="list-style-type: none"> <li>Learning: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Augmented reality (in schools)</li> </ul>
Graham	2015	Include: Experimental; Quasi-experimental	None specified	2004–2011	School-age Children (Primary, Elementary, Middle School)	<ul style="list-style-type: none"> <li>Literacy: Writing</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Writing feedback</li> </ul>
Hammersley	2016	Include: Randomised controlled trials	Exclude: Those with special needs, require a special diet, or have a condition that would limit physical activity	2003–2013	Children; Adolescents	<ul style="list-style-type: none"> <li>Body composition</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: To promote healthy weight (obesity prevention)</li> </ul>
Hao	2021	Include: Experimental with control group	Exclude: Disabilities	2012–2016	School-age Children	<ul style="list-style-type: none"> <li>Literacy: Second language vocabulary</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: English as foreign language</li> </ul>
Hassan-Saleh	2019	Include: Experimental; Quasi-experimental	None specified	2008–2016	Children; Adolescents	<ul style="list-style-type: none"> <li>Literacy: Pronunciation</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Pronunciation</li> </ul>
He	2021	Include: Randomised controlled trials	None specified	2009–2018	Children; Adolescents (9.9-15.8)	<ul style="list-style-type: none"> <li>Physical activity: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Promote physical activity (via mobile phone)</li> </ul>
Hernandez-Jimenez	2019	Include: Experiments; Quasi-experimental	None specified	2009–2017	Children; Adolescents	<ul style="list-style-type: none"> <li>Body composition</li> </ul>	<ul style="list-style-type: none"> <li>Video games: Physically active</li> </ul>
Hunwitz	2018	None	None specified	1997–2018	Early childhood: Preschool-School-age Children (Early Primary, Elementary)	<ul style="list-style-type: none"> <li>Literacy: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Literacy videos</li> </ul>
Ivie	2020	Include: Correlational studies	None specified	2012–2019	Adolescents (14.0-18.0)	<ul style="list-style-type: none"> <li>Psychological health: Depression</li> </ul>	<ul style="list-style-type: none"> <li>Social Media: General</li> </ul>
Janssen	2020	Include: Experimental; Cross-sectional; Longitudinal <sup>1</sup>	Include: Healthy children	2007–2019	Children	<ul style="list-style-type: none"> <li>Sleep: Duration</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General</li> </ul>
Kates	2018	None	None specified	2006–2016	School-age Children	<ul style="list-style-type: none"> <li>Learning: General</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General (mobile phone)</li> </ul>
Kim	2021	Include: experimental or quasi-experimental	None specified	2010–2018	School-age Children (Early Primary, Elementary)	<ul style="list-style-type: none"> <li>Numeracy: General</li> <li>Numeracy: General</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: Educational apps</li> </ul>
Kroesbergen	2003	Include: Within subject design; between subject design	Include: Math difficulties	1985–1999	School-age Children (Primary, Elementary) (7.0-11.0)	<ul style="list-style-type: none"> <li>Numeracy: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Mathematics (via computer in classrooms)</li> </ul>
Kucukalkan	2019	Include: Experimental	Include: Dyscalculia	2007–2016	School-age Children (Primary, Elementary)	<ul style="list-style-type: none"> <li>Numeracy: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Mathematics</li> </ul>
Li	2010	Include: Experimental; Quasi-experimental	None specified	1991–2005	School-age Children	<ul style="list-style-type: none"> <li>Numeracy: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Mathematics</li> </ul>
Li	2022	Include: Randomised controlled trials	Include: Atypically developing	2012–2020	Children; Adolescents	<ul style="list-style-type: none"> <li>Developmental: Gross motor (locomotor)</li> <li>Developmental: Gross motor (non-locomotor)</li> <li>Developmental: Gross motor (object control skills)</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Active video games for motor skills</li> </ul>
Li	2022	Include: experimental or quasi-experimental	None specified	2014–2021	All	<ul style="list-style-type: none"> <li>Learning: Computational thinking</li> </ul>	<ul style="list-style-type: none"> <li>Computer use: Programming exercises</li> </ul>
Liao	2008	Include: All quantitative designs	None specified	1990–2003	School-age Children (Primary, Elementary)	<ul style="list-style-type: none"> <li>Learning: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Education (via computer)</li> </ul>
Liao	2014	Include: Randomised controlled trials	None specified	1990–2012	Children; Adolescents (10.0-14.7)	<ul style="list-style-type: none"> <li>Body composition</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Screen time reduction</li> </ul>
Liu	2019	Include: All quantitative designs	None specified	2007–2014	All (13.3-16.6)	<ul style="list-style-type: none"> <li>Cognition: Creativity</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General</li> </ul>
Liu	2022	Include: studies with control group	None specified	NA	All	<ul style="list-style-type: none"> <li>Cognition: Creativity</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General</li> </ul>
Lu	2021	Include: Cross-sectional only	Include: Healthy only	2014–2018	Adolescents	<ul style="list-style-type: none"> <li>Health: Negative coping style</li> <li>Psychological health: Positive coping style</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General (mobile phone addiction)</li> </ul>
Madigan	2020	Include: Observational	Exclude: Qualitative	1973–2019	Children (6.5-10.8)	<ul style="list-style-type: none"> <li>Literacy: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Education (general)</li> <li>Screen use: General (mobile phone or tablet)</li> </ul>
Major	2021	Include: Randomised controlled trials	None specified	2007–2020	Children; Adolescents	<ul style="list-style-type: none"> <li>Learning: General</li> </ul>	<ul style="list-style-type: none"> <li>Intervention: Literacy (Academics/in schools)</li> </ul>
Mallawaarachchi	2022	Include: Cross-sectional or longitudinal	Include: Non-clinical	2014–2020	Early childhood; Preschool-School-age Children (4-8)	<ul style="list-style-type: none"> <li>Cognition: Developmental speech or language</li> <li>Cognition: Executive functioning</li> <li>Cognition: General</li> <li>Cognition: Psychosocial factors</li> <li>Health: Self-regulation</li> <li>Sleep: General</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General (mobile phone or tablet)</li> </ul>
Mares	2005	None	None specified	1969–1989	Children	<ul style="list-style-type: none"> <li>Cognition: Moral reasoning and perception of out-groups</li> <li>Learning: General</li> <li>Learning: Literacy and numeracy</li> <li>Learning: Physical and Social environment</li> </ul>	<ul style="list-style-type: none"> <li>TV programs and movies: General</li> </ul>
Marker	2022	None specified	None specified	2001–2015	All (6.0-12.2)	<ul style="list-style-type: none"> <li>Body composition</li> </ul>	<ul style="list-style-type: none"> <li>Video games: General</li> </ul>
Marshall	2004	None	None specified	1985–2002	Children; Adolescents	<ul style="list-style-type: none"> <li>Body composition</li> <li>Physical activity: General</li> </ul>	<ul style="list-style-type: none"> <li>TV programs and movies: General</li> <li>Video games: General</li> </ul>
Martins	2019	Include: All quantitative designs	None specified	2003–2018	All	<ul style="list-style-type: none"> <li>Aggression: Towards peers</li> </ul>	<ul style="list-style-type: none"> <li>Screen use: General</li> </ul>
Martins	2022	Include: Cross-over or parallel randomized controlled trials	None specified	2006–2017	Children; Adolescents	<ul style="list-style-type: none"> <li>Diet: Food intake (calories)</li> </ul>	<ul style="list-style-type: none"> <li>TV programs and movies: Mealtime</li> </ul>
Mazeas	2						

## Supplementary File 3 - 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 = 199 <sup>1</sup>	Used, N = 252 <sup>1</sup>
<b>Review Year</b>		
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	6 (3.0%)	11 (4.4%)
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 (4.8%)
2014	1 (0.5%)	7 (2.8%)
2015	8 (4.0%)	16 (6.3%)
2016	16 (8.0%)	9 (3.6%)
2017	10 (5.0%)	8 (3.2%)
2018	6 (3.0%)	15 (6.0%)
2019	38 (19%)	50 (20%)
2020	25 (13%)	49 (19%)
2021	28 (14%)	24 (9.5%)
2022	53 (27%)	31 (12%)

<sup>1</sup> n (%); Median (IQR)

## Effect Size Characteristics

Characteristics of included and excluded effect sizes

<b>Variable</b>	<b>Effect Size Used</b>	
	<b>Not Used, N = 199<sup>1</sup></b>	<b>Used, N = 252<sup>1</sup></b>
<b>Outcome Category</b>		
Education	41 (21%)	88 (35%)
Health Behaviour	56 (28%)	63 (25%)
Physical Health	63 (32%)	31 (12%)
Psychology	39 (20%)	69 (27%)
(missing)	0	1
<b>Broad Outcome</b>		
Aggression	0 (0%)	4 (1.6%)
Antisocial Behaviour	0 (0%)	3 (1.2%)
Body composition	46 (23%)	25 (9.9%)
Cardiometabolic health	4 (2.0%)	3 (1.2%)
Cognition	10 (5.0%)	21 (8.3%)
Developmental	0 (0%)	5 (2.0%)
Diet	17 (8.5%)	15 (6.0%)
Eye health	10 (5.0%)	0 (0%)
Healthy behavior	1 (0.5%)	4 (1.6%)
Learning	29 (15%)	43 (17%)
Literacy	10 (5.0%)	33 (13%)
Numeracy	2 (1.0%)	11 (4.4%)
Physical activity	19 (9.5%)	20 (7.9%)
Physical health	3 (1.5%)	1 (0.4%)
Prosocial Behavior	0 (0%)	3 (1.2%)

<sup>1</sup> n (%); Median (IQR)

## Effect Size Characteristics

Characteristics of included and excluded effect sizes

<b>Variable</b>	<b>Effect Size Used</b>	
	<b>Not Used, N = 199<sup>1</sup></b>	<b>Used, N = 252<sup>1</sup></b>
Psychological health	23 (12%)	26 (10%)
Risky behavior	10 (5.0%)	7 (2.8%)
Science	0 (0%)	1 (0.4%)
Screen time	3 (1.5%)	4 (1.6%)
Self-perceptions	1 (0.5%)	2 (0.8%)
Sleep	11 (5.5%)	20 (7.9%)
Social interactions	0 (0%)	1 (0.4%)
<b>Broad Exposure</b>		
Advertising	14 (7.0%)	5 (2.0%)
Computer use	9 (4.5%)	11 (4.4%)
e-Books	0 (0%)	5 (2.0%)
Internet use	1 (0.5%)	7 (2.8%)
Screen use	77 (39%)	47 (19%)
Screen-based intervention	56 (28%)	92 (37%)
Social Media	6 (3.0%)	10 (4.0%)
TV advertising	1 (0.5%)	0 (0%)
TV programs and movies	12 (6.0%)	30 (12%)
Video games	23 (12%)	45 (18%)
<b>Number of Contributing Studies</b>	5 (3, 10)	8 (4, 16)
(missing)	9	3
<b>Pooled Sample Size</b>	1,894 (672, 9,752)	2,029 (737, 5,923)
<b>Age Group</b>		

<sup>1</sup> n (%); Median (IQR)

## Effect Size Characteristics

Characteristics of included and excluded effect sizes

<b>Variable</b>	<b>Effect Size Used</b>	
	<b>Not Used, N = 199<sup>1</sup></b>	<b>Used, N = 252<sup>1</sup></b>
Adolescents	21 (11%)	57 (23%)
Children	47 (24%)	74 (29%)
Mixed	116 (58%)	102 (40%)
Young children	15 (7.5%)	19 (7.5%)
<b>Sample Type</b>		
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	186 (93%)	228 (90%)
Math difficulties	1 (0.5%)	2 (0.8%)
Overweight and obese	4 (2.0%)	10 (4.0%)
Poor readers	0 (0%)	3 (1.2%)
<b>Study Design</b>		
Cross-sectional only	4 (2.0%)	16 (6.3%)
Experimental	108 (54%)	129 (51%)
Longitudinal only	8 (4.0%)	12 (4.8%)
Mixed or unspecified	50 (25%)	79 (31%)
Observational - mixed	29 (15%)	16 (6.3%)
<b>Study-level Data Available</b>	<b>150 (75%)</b>	<b>187 (74%)</b>
<b>Meets Statistical Certainty Criteria</b>		
Meets Criteria	8 (4.0%)	43 (17%)

<sup>1</sup> n (%); Median (IQR)

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## Effect Size Characteristics

Characteristics of included and excluded effect sizes

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Variable	Effect Size Used	
	Not Used, N = 199 <sup>1</sup>	Used, N = 252 <sup>1</sup>
Unclear	191 (96%)	209 (83%)

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<sup>1</sup> n (%); Median (IQR)

## Supplementary File 4 - Education Outcomes

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

## **Associations Between Exposures and Education Outcomes**

**Learning**

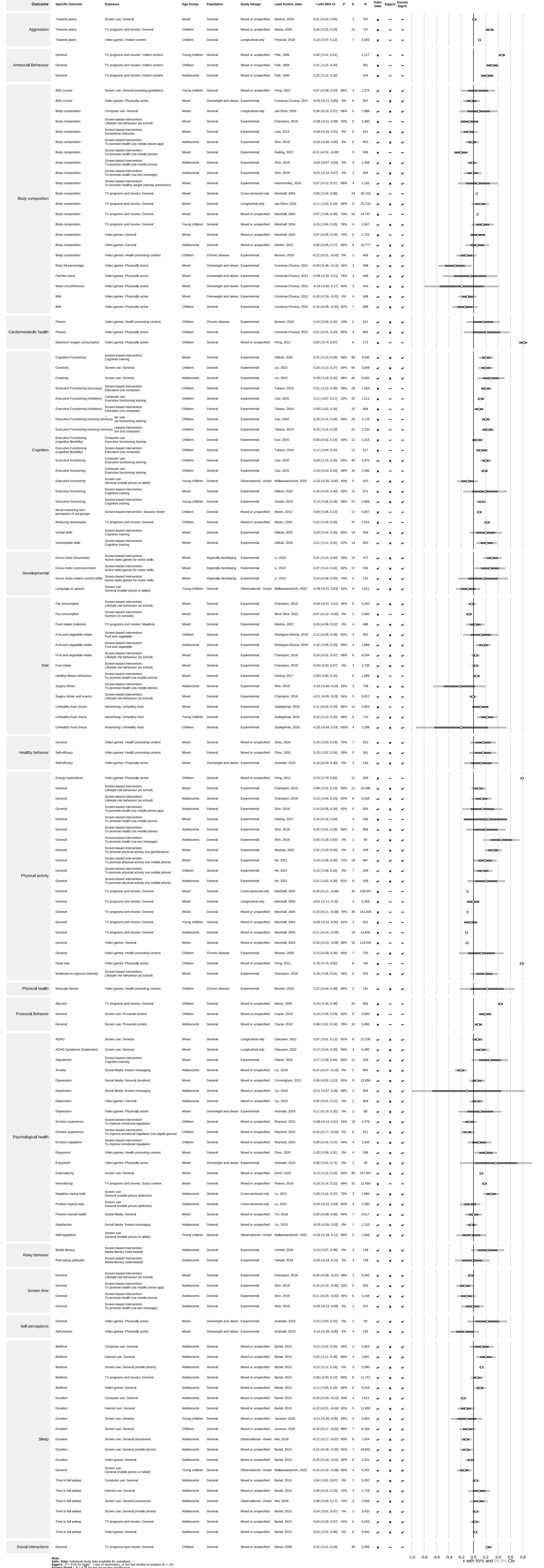
Outcome	Specific Outcome	Exposure	Age Group	Population	Study Design	Lead Author, Date	r with 95% CI	I <sup>2</sup>	K	N	Indiv. Data	Eggers	Excess Signif.	
Learning	General	Screen-based intervention: With digital characters	Children	General	Experimental	Schroeder, 2013	0.28 [ 0.18, 0.37]	0%	5	348	✓	✗	✓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

**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 5 - Health-related Outcomes

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

# Associations Between Exposures and Health-related Outcomes



## Supplementary File 7 - 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 9 - Included Studies

**Description:** References for the included studies.

## Included Studies

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## Supplementary File 10 - Effect Size Codebook

**Description:** Generated codebook for the dataset.

# Codebook for the Complete Effects Data

Autogenerated data summary from dataReporter

2023-06-21 14:41:16.914403

## Data report overview

The dataset examined has the following dimensions:

Feature	Result
Number of observations	451
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

Feature	Result
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	92
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 %)

Feature	Result
Number of unique values	285
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 (4.21 %)
Number of unique values	265
Median	0.05
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 (4.21 %)
Number of unique values	289
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
Number of missing obs.	14 (3.1 %)
Number of unique values	52
Median	7
1st and 3rd quartiles	4; 12
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	1836
1st and 3rd quartiles	639.5; 7389
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 (34.81 %)
Number of unique values	198
Median	67.28
1st and 3rd quartiles	24.1; 82.85
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.	199 (44.12 %)
Number of unique values	177
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.	208 (46.12 %)
Number of unique values	179
Median	0.02
1st and 3rd quartiles	-0.11; 0.09

Feature	Result
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.	208 (46.12 %)
Number of unique values	193
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 (45.23 %)
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
Number of missing obs.	204 (45.23 %)
Number of unique values	244
Median	-0.01
1st and 3rd quartiles	-0.16; 0.06
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 (45.23 %)
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 (45.23 %)
Number of unique values	244
Median	-0.1
1st and 3rd quartiles	-0.22; 0.01
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 (45.23 %)
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 (45.23 %)
Number of unique values	48
Median	7
1st and 3rd quartiles	4; 12.5

Feature	Result
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 (45.23 %)
Number of unique values	234
Median	1836
1st and 3rd quartiles	687.5; 5611.5
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 (45.23 %)
Number of unique values	199
Median	73.94
1st and 3rd quartiles	26.23; 88.62
Min. and max.	0; 99.51

---

## reanalysis\_eggers\_p

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

Feature	Result
Variable type	numeric
Number of missing obs.	365 (80.93 %)
Number of unique values	86
Median	0.22
1st and 3rd quartiles	0.03; 0.51
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 (80.93 %)
Number of unique values	86
Median	-0.05
1st and 3rd quartiles	-0.19; 0.1
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 (80.93 %)
Number of unique values	86
Median	0.29
1st and 3rd quartiles	0.1; 0.65
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 (45.23 %)
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 (45.23 %)
Number of unique values	244
Median	3.21
1st and 3rd quartiles	1.62; 6.67

---

Feature	Result
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 (45.23 %)
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 (45.23 %)
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
Number of missing obs.	204 (45.23 %)
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 (45.23 %)
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: tasanders).
- Report creation time: Wed Jun 21 2023 14:41:17
- Report was run from directory: /Users/tasanders/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-apple-darwin20 (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")
```