

Review characteristics for meta-analyses providing unique effects							
First Author	Year	Design Restrictions	Sample Restrictions	Year Range Earliest - Latest	Sample Age Restrictions (Age Range)?	Outcomes Assessed	Exposures Assessed
						<ul style="list-style-type: none">• Literacy: Listening comprehension• Literacy: Reading comprehension• Literacy: Phonemic awareness• Literacy: Reading fluency• Literacy: Reading comprehension• Literacy: Vocabulary knowledge	<ul style="list-style-type: none">• Intervention: Literacy (Abacadabra; in schools)
Adelantado-Renua	2019	Include: Cross-sectional studies	None specified	1982-2019	Children; Adolescents (5.7-18.0)	<ul style="list-style-type: none">• Learning: General• Literacy: General• Numeracy: General	<ul style="list-style-type: none">• Screen use: General• TV programs and movies: General• Video games: General
Andrade	2019	Include: Interventions	Include: Overweight and obese	2010-2017	Children; Adolescents	<ul style="list-style-type: none">• Healthy behavior: Self-efficacy• Psychological health: Depression• Psychological health: Enjoyment• Perceptions: General• Self-perceptions: Self-esteem	<ul style="list-style-type: none">• Video games: Physically active
Arztmann	2022	None specified	None specified	2008-2020	School-age Children (Primary, Elementary, Middle School)	<ul style="list-style-type: none">• Learning: Behavior• Learning: Learning• Motivation	<ul style="list-style-type: none">• Video games: Educational (with competition)
Aspiranti	2020	Include: Interventions	Include: Autism	2013-2015	School-age Children (Primary, Elementary)	<ul style="list-style-type: none">• Learning: General	<ul style="list-style-type: none">• Intervention: Education (via touch screen)
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">• Sleep: Bedtime• Sleep: Duration• Sleep: Time to fall asleep	<ul style="list-style-type: none">• Screen use: General (mobile phone)• TV programs and movies: General• Video games: General
Beck Silva	2022	Include: Randomised controlled trials and quasi-RCTs	Exclude: Any disease Mental disorders	1999-2019	Adolescents	<ul style="list-style-type: none">• Diet: Fat consumption	<ul style="list-style-type: none">• Intervention: Nutrition (in schools)
Benavides-Varela	2020	Include: Randomised controlled trials	Include: Math difficulties	2006-2018	Children	<ul style="list-style-type: none">• Numeracy: Mathematics	<ul style="list-style-type: none">• Intervention: Mathematics
Blok	2002	None	Include: Regular students, poor readers or dyslexics Exclude: Severe or multiple disabilities	1990-2000	All (5.4-11.5)	<ul style="list-style-type: none">• Literacy: Reading fluency	<ul style="list-style-type: none">• Intervention: Literacy
Bossen	2020	Include: Randomised controlled trials	Include: Chronic disease	2011-2018	Children (10.0-15.7)	<ul style="list-style-type: none">• Body composition: Cardiometabolic health: Fitness• Physical activity: General• Physical health: Psychosocial fitness	<ul style="list-style-type: none">• Video games: General (promoting content)
Boyland	2016	Include: Experimental	None specified	2004-2015	Children; Adolescents (6.0-10.4)	<ul style="list-style-type: none">• Diet: Food intake	<ul style="list-style-type: none">• Advertising: Unhealthy food
Byun	2018	Include: All quantitative designs	None specified	2006-2014	School-age Children	<ul style="list-style-type: none">• Numeracy: General	<ul style="list-style-type: none">• Video games: Numeracy
Cao	2020	Include: designs with control groups	Exclude: Brain damage	2002-2019	Children (3.4-14.3)	<ul style="list-style-type: none">• Cognition: Executive functioning• Cognition: Executive Functioning (cognitive flexibility)• Cognition: Executive Functioning (inhibition)• Cognition: Executive Functioning (working memory)	<ul style="list-style-type: none">• Computer use: Executive functioning training
Champion	2019	Include: Randomised controlled trials	None specified	2003-2017	School-age Children (11.4-15.9)	<ul style="list-style-type: none">• Body composition: General• Diet: Fat consumption• Diet: Fruit and vegetable intake• Diet: Fruit intake• Diet: Sugary drinks and snacks• Physical activity: General• Physical activity: Moderate-to-vigorous intensity• Risky behavior: Alcohol consumption• Risky behavior: Smoking• Screen time: General	<ul style="list-style-type: none">• Intervention: Lifestyle risk behaviour (at school)
Chan	2014	Include: Experimental; Quasi-experimental	None specified	2002-2012	School-age Children	<ul style="list-style-type: none">• Numeracy: General	<ul style="list-style-type: none">• Intervention: Mathematics (geometry software)
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">• Learning: General	<ul style="list-style-type: none">• Screen use: General (in schools)
Chen	2020	Include: Experimental designs	None specified	2008-2019	All	<ul style="list-style-type: none">• Learning: General	<ul style="list-style-type: none">• Video games: Educational (with competition)
Cheung	2012	Include: Randomised controlled trials	None specified	1982-2010	School-age Children	<ul style="list-style-type: none">• Literacy: Reading	<ul style="list-style-type: none">• Intervention: Reading (in schools)
Cheung	2013	Include: Experimental; Quasi-experimental	None specified	1980-2010	School-age Children	<ul style="list-style-type: none">• Numeracy: General	<ul style="list-style-type: none">• Intervention: Mathematics (in schools)
Cho	2018	Include: experimental designs with control group	None specified	2008-2013	All	<ul style="list-style-type: none">• Learning: Second language	<ul style="list-style-type: none">• Screen use: General (mobile phone for language learning)
Claussen	2022	Include: Longitudinal; Retrospective	None specified	2004-2018	All	<ul style="list-style-type: none">• Psychological health: ADHD• Psychological health: ADHD Symptoms (inattention)	<ul style="list-style-type: none">• Screen use: General
Clinton	2019	Include: randomised experimental designs	Exclude: Disabilities	2011-2016	All	<ul style="list-style-type: none">• Literacy: Reading performance	<ul style="list-style-type: none">• Screen use: Reading (vs paper)
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	2008-2019	All (4.5-11.6)	<ul style="list-style-type: none">• Body composition: BMI z-score• Cardiometabolic health: Fitness	<ul style="list-style-type: none">• Video games: Physically active
Comeras-Chueca	2021	Include: 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 (8.0-14.0)	<ul style="list-style-type: none">• Body composition: BMI z-score• Body composition: Body fat• Body composition: Fat-free mass• Body composition: Waist circumference	<ul style="list-style-type: none">• Video games: Physically active
Coyne	2018	None	None specified	1975-2017	Children; Adolescents	<ul style="list-style-type: none">• Prosocial behavior: General	<ul style="list-style-type: none">• Screen use: Prosocial content
Cunningham	2021	Include: Quantitative designs	None specified	2014-2018	All (11.2-16.8)	<ul style="list-style-type: none">• Psychological health: Depression	<ul style="list-style-type: none">• Social Media: General (duration)
Cushing	2010	Include: All quantitative designs; Experimental	None specified	1989-2009	Children; Adolescents	<ul style="list-style-type: none">• Healthy behavior: General	<ul style="list-style-type: none">• Intervention: Health behaviours
Darling	2017	Include: Intervention	None specified	2006-2016	Children; Adolescents (8.7-16.0)	<ul style="list-style-type: none">• Body composition: General• Diet: Healthy dietary behaviour• Physical activity: General	<ul style="list-style-type: none">• Intervention: To promote health (via mobile phone)
Eirich	2022	Include: experimental or observational	Exclude: Atypically developing	1978-2021	Children (0.5-11.0)	<ul style="list-style-type: none">• Psychological health: Externalizing• Psychological health: Internalizing	<ul style="list-style-type: none">• Screen use: General
Feng	2021	Include: Quantitative designs	Include: Healthy children	2017-2019	Early childhood; Pre-school	<ul style="list-style-type: none">• Body composition: BMI z-score	<ul style="list-style-type: none">• Screen use: Education (meeting guidelines)
Ferguson	2017	None	None specified	2005-2017	Children; Adolescents	<ul style="list-style-type: none">• Risky behavior: Sexual activity• Risky behavior: Sexual activity (initiation of sex)	<ul style="list-style-type: none">• Screen use: Sexual content
Ferguson	2020	Include: Experimental, correlational, or longitudinal	None specified	2009-2013	All (18.3-17.5)	<ul style="list-style-type: none">• Aggression: General	<ul style="list-style-type: none">• Video games: Violent content
Folkvord	2018	Include: Interventions	None specified	2007-2018	Children; Adolescents	<ul style="list-style-type: none">• Diet: Food intake (calories)	<ul style="list-style-type: none">• Advertising: Advergaming
Furenes	2021	Include: experimental or quasi-experimental	Exclude: Cochlear implants or autism Autism	2002-2019	Early childhood; Pre-school; School-age Children (Early Primary, Elementary)	<ul style="list-style-type: none">• Literacy: Reading comprehension• Literacy: Literacy• Literacy: Literacy learning	<ul style="list-style-type: none">• e-Books: General
Gardella	2017	Include: Cross-sectional	None specified	2006-2014	Adolescents (12.5-16.2)	<ul style="list-style-type: none">• Learning: Educational achievement problems• Learning: School attendance problems	<ul style="list-style-type: none">• Internet use: Cyberbullying victimization
Garzón	2019	Include: Experimental with control group	None specified	NA	All	<ul style="list-style-type: none">• Learning: General	<ul style="list-style-type: none">• Intervention: Augmented reality (in schools)
Graham	2015	Include: Experimental; Quasi-experimental	None specified	2004-2011	School-age Children (Primary, Elementary, Middle School)	<ul style="list-style-type: none">• Literacy: Writing	<ul style="list-style-type: none">• Intervention: Writing feedback
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">• Body composition: General	<ul style="list-style-type: none">• Intervention: To promote healthy weight (obesity prevention)
Hao	2021	Include: Experimental with control group	Exclude: Disabilities	2012-2018	School-age Children	<ul style="list-style-type: none">• Learning: Second language vocabulary	<ul style="list-style-type: none">• Intervention: English as foreign language
Hassan-Saleh	2019	Include: Experimental; Quasi-experimental	None specified	2008-2016	Children; Adolescents	<ul style="list-style-type: none">• Literacy: Pronunciation	<ul style="list-style-type: none">• Intervention: Pronunciation
He	2021	Include: Randomised controlled trials	None specified	2009-2018	Children; Adolescents (9.9-16.6)	<ul style="list-style-type: none">• Physical activity: General	<ul style="list-style-type: none">• Intervention: To promote physical activity (via mobile phone)
Hernandez-Jimenez	2019	Include: Experimental; Quasi-experimental	None specified	2009-2017	Children; Adolescents	<ul style="list-style-type: none">• Body composition: General	<ul style="list-style-type: none">• Video games: Physically active
Hurwitz	2018	None	None specified	1997-2018	Early childhood; Pre-school; School-age Children (Early Primary, Elementary)	<ul style="list-style-type: none">• Literacy: General	<ul style="list-style-type: none">• Intervention: Literacy videos
Ivie	2020	Include: Correlational studies	None specified	2012-2019	Adolescents (14.0-18.0)	<ul style="list-style-type: none">• Psychological health: Depression	<ul style="list-style-type: none">• Social Media: General
Janssen	2020	Include: Experimental; Cross-sectional; Longitudinal	Include: Healthy children	2007-2019	Children	<ul style="list-style-type: none">• Sleep: Duration	<ul style="list-style-type: none">• Screen use: General
Kates	2018	None	None specified	2008-2016	School-age Children	<ul style="list-style-type: none">• Learning: General	<ul style="list-style-type: none">• Screen use: General (mobile phone)
Kim	2021	Include: experimental or quasi-experimental	None specified	2010-2018	School-age Children (Early Primary, Elementary)	<ul style="list-style-type: none">• Learning: Literacy and numeracy• Literacy: General• Numeracy: General	<ul style="list-style-type: none">• Screen use: Educational apps
Kroesbergen	2003	Include: Within subject design; between subject design	Include: Math difficulties	1985-1999	School-age Children (Primary, Elementary) (7.0-11.3)	<ul style="list-style-type: none">• Numeracy: General	<ul style="list-style-type: none">• Intervention: Mathematics (in classrooms)
Kucukalkan	2019	Include: Experimental	Include: Dyscalculia	2007-2016	School-age Children (Primary, Elementary)	<ul style="list-style-type: none">• Numeracy: General	<ul style="list-style-type: none">• Intervention: Mathematics
Li	2010	Include: Experimental; Quasi-experimental	None specified	1991-2005	School-age Children	<ul style="list-style-type: none">• Numeracy: General	<ul style="list-style-type: none">• Intervention: Mathematics
Li	2022	Include: Randomised controlled trials	Include: Atypically developing	2012-2020	Children; Adolescents	<ul style="list-style-type: none">• Developmental: Gross motor (locomotor)• Developmental: Gross motor (non-locomotor)• Developmental: Gross motor (object control skills)	<ul style="list-style-type: none">• Intervention: To improve games for motor skills
Li	2022	Include: experimental or quasi-experimental	None specified	2014-2021	All	<ul style="list-style-type: none">• Learning: Computational thinking	<ul style="list-style-type: none">• Computer use: Programming exercises
Liao	2008	Include: All quantitative designs	None specified	1990-2003	School-age Children (Primary, Elementary)	<ul style="list-style-type: none">• Learning: General	<ul style="list-style-type: none">• Intervention: To promote health (via computer)
Liao	2014	Include: Randomised controlled trials	None specified	1999-2012	Children; Adolescents (4.0-14.7)	<ul style="list-style-type: none">• Body composition: General	<ul style="list-style-type: none">• Intervention: Screen time reduction
Liu	2019	Include: All quantitative designs	None specified	2007-2014	All (13.3-16.6)	<ul style="list-style-type: none">• Psychological health: Anxiety• Psychological health: Depression• Psychological health: Satisfaction	<ul style="list-style-type: none">• Social Media: Instant messaging• Video games: General
Liu	2022	Include: studies with control group	None specified	NA	All	<ul style="list-style-type: none">• Cognition: Creativity	<ul style="list-style-type: none">• Screen use: General
Lu	202						