

Review characteristics for studies providing unique effects									
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Review characteristics for meta-analyses providing unique effects									
First Author	Year	Design	Restrictions	Sample	Restrictions	Year Range First-Last	Sample Age Restrictions (Age Range)	Outcome Assessed	Exposures Assessed
Abrami	2020	Include: Experimental designs		None specified		2009–2019	School-age Children (Early Primary, Elementary)	<ul style="list-style-type: none">Literacy: Reading comprehensionLiteracy: PhonicsLiteracy: GeneralPhonemic awarenessLiteracy: Reading comprehensionLiteracy: Reading fluencyAdultery: Vocabulary knowledge	<ul style="list-style-type: none">Intervention: Literacy (Abracadabra, 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: GeneralLiteracy: GeneralAdultery: General	<ul style="list-style-type: none">Screen use: GeneralTV programs and movies: GeneralVideo games: General
Andrade	2019	Include: Interventions		Include: Overweight and obese		2010–2017	Children; Adolescents	<ul style="list-style-type: none">Healthy behavior: Self-efficacyPsychological health: DepressionPsychological health: EmploymentSelf-perceptions: GeneralSelf-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: BehaviorLearning: LearningMotivation	<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: BedtimeSleep: DurationSleep: Time to fall asleep	<ul style="list-style-type: none">Screen use: General (mobile phone)TV programs and movies: GeneralVideo 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		Include: Randomised controlled trials		Include: Chronic disease		2011–2018	Children (10.0-15.7)	<ul style="list-style-type: none">Body compositionCardiometabolic health: FitnessPhysical activity: GeneralPhysical health: Muscular fitness	<ul style="list-style-type: none">Video games: Health promoting content
Boyland	2016	Include: Experimental		None specified		2004–2015	Children; Adolescents (6.2-10.4)	<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 functioningCognition: InhibitionCognition: Functioning (cognitive flexibility)Cognition: 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 compositionDiet: Fat consumptionDiet: Fruit and vegetable intakeDiet: Sugar intakePhysical activity: Moderate-to-vigorous intensityRisky behavior: consumptionRisky behavior: SmokingScreen 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: Dynamic 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 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: BMICardiometabolic health: Fitness	<ul style="list-style-type: none">Video games: Physically active
Comeras-Chueca	2021	Include: randomized and non-randomized controlled trials (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: BMIBody composition: BMIBody composition: BMIBody composition: Fat-free massBody 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: Literacy	<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 compositionDiet: Healthy dietary behaviourPhysical 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: ExternalizingPsychological 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: General (meeting guidelines)
Ferguson	2017	None		None specified		2005–2017	Children; Adolescents	<ul style="list-style-type: none">Risky behavior: Sexual activityRisky 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 (7.8-17.5)	<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 comprehensionLiteracy: VocabularyLearning: 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 problemsLearning: 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 feedback	<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	<ul style="list-style-type: none">Intervention: To promote healthy behaviour (via mobile phone)
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	<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 numeracyLiteracy: GeneralAdultery: 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 (via computer 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: Active (mobile phone for motor skills)
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