

Screen use by children aged under five: methods for review of systematic reviews

Early Years Screen Time Advisory Group

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Methods for review of systematic reviews

The Early Years Screen Time Advisory Group ('we' from here on) undertook a systematic review of scientific reviews related to early years screen use using the following methodology. Terms of Reference and all panel members can be found at <https://www.gov.uk/government/groups/early-years-screen-time-advisory-group>.

We sought to identify systematic reviews that examined the impacts of screen use on a wide range of health and developmental outcomes for children aged under 5. We also sought to identify reviews that examine potential benefits as well as harms of digital media use in subgroups of children such as those with neurodevelopmental disorders.

Database

Single database searched – PubMed.

Search terms

Search terms for digital screen use modified for Medline from Vasconcellos et al 2025.21 with addition of AI to search terms.

Outcomes: we used age-related terms to restrict studies to young children but did not restrict reviews by outcome in order to identify the widest range of health and developmental outcomes. We sought to therefore identify any systematic reviews related to screen use in young children listed in the database, and excluded reviews subsequently based upon eligibility criteria.

We used the following search terms:

- 'Systematic Review' [Publication Type]
- 'Child, Preschool'[Mesh] OR 'Infant'[Mesh]
- TI infant* OR preschool* OR baby
- (S1 OR S2 OR S3)
- 'Screen Time'[Mesh] OR 'Social Media'[Mesh] OR 'Video Games'[Mesh] OR 'Television'[Mesh] OR 'Artificial Intelligence'[Mesh] OR 'Smartphone'[Mesh] 'Digital Media'[Mesh] OR 'Computers, Handheld'[Mesh]
- TI 'screen use' OR 'screen#time' OR 'social media' OR 'video gam*' OR television OR computer* OR tablet* OR smartphone* OR Internet OR 'digital media' OR 'electronic device*' OR 'digital device*'
- AND (#5 OR #6)

The final search string was therefore:

'Systematic Review' [Publication Type] AND (('Child, Preschool'[Mesh] OR 'Infant'[Mesh]) OR (TI infant* OR preschool* OR baby)) AND (('Screen Time'[Mesh] OR 'Social

Media'[Mesh] OR 'Video Games'[Mesh] OR 'Television'[Mesh] OR 'Artificial Intelligence'[Mesh] OR 'Smartphone'[Mesh] 'Digital Media'[Mesh] OR 'Computers, Handheld'[Mesh]) OR (TI 'screen use' OR 'screen#time' OR 'social media' OR 'video gam*' OR television OR computer* OR tablet* OR smartphone* OR Internet OR 'digital media' OR 'electronic device*' OR 'digital device*')).

Exclusion criteria

Reviews with the following were excluded:

- Reviews from before 2010
- Non-systematic reviews
- Maternal outcomes
- Studies of screen use in children >five years
- Studies of health outcomes not relevant (e.g. vaccination, parasitic infections, outcomes in very specific groups of children e.g. those with congenital conditions)
- Studies in low and middle income countries judged to be not relevant to the UK
- Studies of digital health apps or e-health interventions aimed at parents
- Parental screen use related to infant feeding and other early childhood health issues that were not judged to be relevant to the question

Flow

PubMed was searched by one reviewer (Russell Viner) on 22 January 2026.

632 items were obtained for review.

After screening by title and abstract, 69 studies were identified as potentially eligible.

After full text screening, 21 were excluded, leaving 48 included reviews.

Additional identified reviews

Fifteen additional reviews that met the eligibility criteria were identified by the EYSTAG panel or through the call for evidence.

The total number of reviews that informed this work was therefore 63.

Included reviews

Included reviews are listed below in alphabetical order:

Ahmer A, Raza M, Azhar M, et al. A Systematic Review and Meta-Analysis on the Impact of Screen Time on the Social-Emotional Development of Children Under-five Years. J Coll Physicians Surg Pak 2025;35(3):351-58. doi: 10.29271/jcpsp.2025.03.351

AlSoqih NS, Al-Harbi FA, Alharbi RM, et al. Efficacy of Virtual Reality Interventions for Motor Function Improvement in Cerebral Palsy Patients: Systematic Review and Meta-Analysis. *J Clin Med* 2025;14(23) doi: 10.3390/jcm14238388 [published Online First: 20251126]

Arabiat D, Al Jabery M, Robinson S, et al. Interactive technology use and child development: A systematic review. *Child Care Health Dev* 2023;49(4):679-715. doi: 10.1111/cch.13082 [published Online First: 20221213]

Bal M, Kara Aydemir AG, Tepetaş Cengiz G, et al. Examining the relationship between language development, executive function, and screen time: A systematic review. *PLoS One* 2024;19(12):e0314540. doi: 10.1371/journal.pone.0314540 [published Online First: 20241226]

Beamish N, Fisher J, Rowe H. Parents' use of mobile computing devices, caregiving and the social and emotional development of children: a systematic review of the evidence. *Australas Psychiatry* 2019;27(2):132-43. doi: 10.1177/1039856218789764 [published Online First: 20180920]

Belmon LS, van Stralen MM, Busch V, et al. What are the determinants of children's sleep behavior? A systematic review of longitudinal studies. *Sleep Med Rev* 2019;43:60-70. doi: 10.1016/j.smrv.2018.09.007 [published Online First: 20181112]

Beyens I, Valkenburg PM, Piotrowski JT. Screen media use and ADHD-related behaviors: Four decades of research. *Proc Natl Acad Sci U S A* 2018;115(40):9875-81. doi: 10.1073/pnas.1611611114

Bolormaa E, Mirghani Aljailani Fadhlulla Y, Kim HJ, et al. Screen time and pubertal development: a systematic review and meta-analysis. *Annals of Human Biology* 2025;52(1):2577891. doi: 10.1080/03014460.2025.2577891

Braune-Krickau K, Schneebeli L, Pehlke-Milde J, et al. Smartphones in the nursery: Parental smartphone use and parental sensitivity and responsiveness within parent-child interaction in early childhood (0-5 years): A scoping review. *Infant Ment Health J* 2021;42(2):161-75. doi: 10.1002/imhj.21908 [published Online First: 20210115]

Byrne R, Terranova CO, Trost SG. Measurement of screen time among young children aged 0-6 years: A systematic review. *Obes Rev* 2021;22(8):e13260. doi: 10.1111/obr.13260 [published Online First: 20210507]

Carson V, Kuzik N, Hunter S, et al. Systematic review of sedentary behavior and cognitive development in early childhood. *Prev Med* 2015;78:115-22. doi: 10.1016/j.ypmed.2015.07.016 [published Online First: 20150726]

Chen Y, Fanchiang HD, Howard A. Effectiveness of Virtual Reality in Children With Cerebral Palsy: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Phys Ther* 2018;98(1):63-77. doi: 10.1093/ptj/pzx107

Chong SC, Teo WZ, Shorey S. Exploring the perception of parents on children's screentime: a systematic review and meta-synthesis of qualitative studies. *Pediatr Res* 2023;94(3):915-25. doi: 10.1038/s41390-023-02555-9 [published Online First: 20230325]

Crebbin K, Grisbrook T, Elliott C, et al. The Use of Serious Gaming to Improve Sensorimotor Function and Motivation in People with Cerebral Palsy: A Systematic Review. *Games Health J* 2023;12(3):169-97. doi: 10.1089/g4h.2022.0112 [published Online First: 20220926]

da Silva Junior DC, Castro YM, Dutra RP, et al. Impact of the Use of Interactive Screens on Language Development in Children up to 6 Years of Age: A Systematic Review. *Child Care Health Dev* 2025;51(6):e70176. doi: 10.1111/cch.70176

Downing KL, Hnatiuk J, Hesketh KD. Prevalence of sedentary behavior in children under 2years: A systematic review. *Prev Med* 2015;78:105-14. doi: 10.1016/j.ypmed.2015.07.019 [published Online First: 20150729]

Duch H, Fisher EM, Ensari I, et al. Screen time use in children under 3 years old: a systematic review of correlates. *Int J Behav Nutr Phys Act* 2013;10:102. doi: 10.1186/1479-5868-10-102 [published Online First: 20130823]

Dunst CJ, Trivette CM, Hamby DW, et al. Systematic Review of Studies Promoting the Use of Assistive Technology Devices by Young Children with Disabilities. *Practical Evaluation Reports, Volume 5, Number 1* 2013;5(1):1-32.

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Foreman J, Salim AT, Praveen A, et al. Association between digital smart device use and myopia: a systematic review and meta-analysis. *Lancet Digit Health* 2021;3(12):e806-e18. doi: 10.1016/s2589-7500(21)00135-7 [published Online First: 20211005]

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