# Protocol Screen Time Neurocognitive Systematic Review

# PROTOCOL: DIGITAL SCREEN TIME IMPACT ON NEUROCOGNITIVE DEVELOPMENT IN CHILDREN (0-12 YEARS)  
  
\*\*Systematic Review Protocol\*\*  
\*\*PROSPERO Registration:\*\* CRD42024567893  
\*\*Protocol Version:\*\* 1.0  
\*\*Date:\*\* December 2024  
\*\*Research Team:\*\* Pediatric Neurocognitive Development Research Group  
  
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## \*\*EXECUTIVE SUMMARY\*\*  
  
\*\*Title:\*\* The Impact of Digital Screen Time on Neurocognitive Development in Children Under 12 Years: A Comprehensive Systematic Review and Meta-Analysis  
  
\*\*Research Question:\*\* What is the association between digital screen time exposure (duration, type, interactive vs. passive) and neurocognitive outcomes (executive function, working memory, language development, attention regulation) in typically developing children aged 0-12 years?  
  
\*\*Rationale:\*\* Despite widespread digital media use by children, evidence regarding neurocognitive impacts remains fragmented. This protocol outlines rigorous methodology to synthesize global evidence, quantify dose-response associations, and differentiate effects by content type and developmental period.  
  
\*\*Methodology:\*\* Comprehensive systematic review with meta-analysis, adhering to PRISMA 2020 and Cochrane methodological standards.  
  
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## \*\*1. BACKGROUND AND RATIONALE\*\*  
  
### \*\*1.1 Problem Statement\*\*  
Children worldwide experience unprecedented digital media exposure, with daily screen time exceeding 2-4 hours across developed nations and rapidly increasing in developing regions. The relationship between digital screen time and neurocognitive development has generated substantial research but remains poorly characterized due to methodological inconsistencies and limited statistical power.  
  
### \*\*1.2 Knowledge Gap\*\*  
Existing reviews suffer from critical limitations:  
- Failure to distinguish between interactive vs. passive content  
- Lack of dose-response modeling  
- Insufficient attention to developmental periods  
- Methodological diversity preventing pooled analyses  
- Limited sample sizes and geographic representati...