

Interventions for Healthy Screen Use: Preliminary Results from a Scoping Review

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Introduction

Technology is becoming increasingly prevalent within our society, leading to early exposure in childhood. Screen time has been proposed to have an effect on health, development, academics, and psychosocial behaviors. Current research suggests negative implications of screen time and emphasizes the need for interventions to foster balanced use of screen time. Even so, there has been inconclusive evidence supporting the benefits of specific screen time guidelines.

The objective of this scoping review is to characterize the practices and understudied areas as it pertains to screen time interventions in elementary school children (5 to 11).

Methods

A scoping review was conducted following the JBI Manual for Evidence Synthesis and reported according to PRISMA-ScR guidelines. Comprehensive searches were performed in MEDLINE, EMBASE, CENTRAL, PsycArticles, and ProQuest Dissertations & Theses, with no restrictions on date or language. Two reviewers independently screened studies in Rayyan using a calibrated PCC framework, and disagreements were resolved through discussion with a third reviewer. Preliminary results are summarized in Table 1, outlining the main intervention characteristics and identified outcomes.

Results

We screened 3,360 records from all databases after removing 237 duplicates (Figure 1). A total of 18 studies met the inclusion criteria, comprising 16 primary studies and 2 systematic reviews. Most interventions were implemented in school settings and emphasized increasing physical activity to prevent obesity, with screen time reduction addressed as a secondary outcome. Overall, the findings suggest that interventions targeting screen time reduction contribute to improved physical and psychosocial well-being.

Results

Interventions to reduce screen time have been implemented, however standardization of methods and outcomes is still necessary.

Table 1. Summary of studies included in preliminary scoping review

Author	Setting	Intervention	Outcome of Interest
Anderson, et al. 2015	Community	16 weekly 2-hour classes including educational activtiies, group cooking/eating, and physical activities for parents/children.	Obesity prevention, screen time, fruit and vegetable consumption, sugary beverage consumption
Cliff, et al. 2010	University	3-arm intervention: child-centered physical activity program, parent-centered dietary modification program, and a combination of both.	Movement skills, physical activity, screen behaviors
Diamantis, et al. 2023	School	Synchronous, online educational program implemented in the classroom consisting of two 1-hour sessions on nutrition over 2-3 weeks.	Dietary habits, physical activity, screen time, psychosocial functioning
Duncan, et al. 2019	School	8-week curriculum based homework schedule with an in class teaching lesson.	Physical activity, dietary patterns, body size, tv and computer usage
Faghy, et al. 2021	School	12-week intervention with 60-min sessions with activities and educational materials on physical activity, healthy eating, sleep quality, and reducing screen time/sedentary activities.	Physical activity, healthy eating, sleep, screen time
Gentile, et al. 2009	Community, home, school	Guidelines: be active for >60 minutes/day, to limit screen time to <2 hours/day, eat >5 fruits/vegetables/day. Community component: paid and unpaid media advertising. School component: teachers given educational materials, but not required to participate. Family component: monthly packets with behavioral modifying tools	Screen time, fruit and vegetable intake, physical activity
Harper, 2015	University	5 classes taught by paraprofessionals to parents of children ages 2-12 about nutrition.	Nutrition, screen time, physical activity
Kobel, et al. 2014	School	School-based, teacher-led intervention consisting of teaching materials based on action alternatives for recreational activities, physical activity, and healthy diet.	Physical activity, screen media use, regular breakfast intake, soft drink consumption
Lawlor, et al. 2016	Home and School	Teacher training, provision of lesson and child-parent interactive homework plans, all materials required for lessons and homework, and written materials for school newsletters and parents.	Physical activity and healthy eating, sedentary behaviors
Lippevelde, et al. 2014	Home and School	6-week program with educational lessons at school, newsletters with summary of the lessons and home tasks, ending with a family fun event.	Sedentary behaviors
Lloyd, et al. 2011	School	4-phase school program conducted over 3 academic terms consisting of physical activity workshops, educational lessons, interactive drama activities, and goal setting sessions. .	Obesity prevention, sedentary behaviors
Morgan, et al. 2019	Community and home	8-week program with for father-daughter dyads consisting of weekly educational and practical sessions with home tasks.	Physical activity, screen time, fundamental movement skills, parenting skills
Pearson, et al. 2020	Home and School	4 online sessions + resources for parents and children at home. Four 30-min lessons during school.	Screen time, unhealthy snacking
Russo, 2020	School	2-week intervention including 5 art activities/week followed by a cognitive test at the end of each week.	Screen time
Varagiannis, et al. 2021	Community and home	6 month program with 3 group interventions. Each intervention included bi-weekly sessions with information from a dietitian, psychologist, physical education trainer, and chef delivered either in person or at home.	Eating behaviors, physical activity, healthy lifestyle behaviors, screen time
Author	Aim		Findings
Marsh, et al. 2013	Evaluate interventions with a family component that targeted reduction of sedentary time, including TV viewing, video games and computer use, in children.		Studies in younger populations and those with parent inclusion were more effective.
Žmavc, et al. 2025	Evaluate existing school-based preventative interventions aimed at reducing digital addiction and screen time among 6-19 year olds.		School-based interventions, external leadership, and parent inclusion were effective.

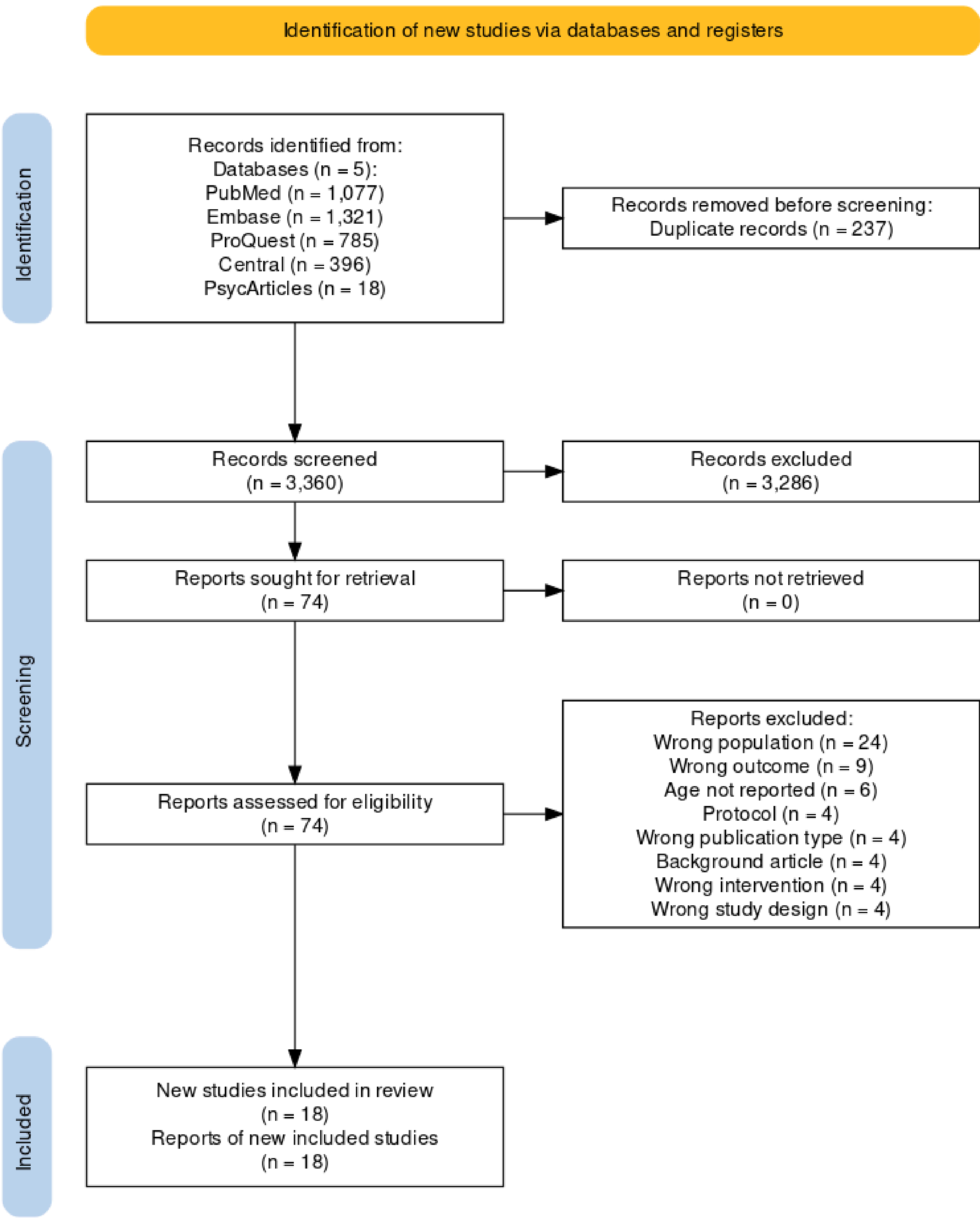


Figure 1. PRISMA Flow Diagram

Conclusion

- Interventions for screen time have been implemented within this age group, with variability in design, time frame, outcomes, and settings across different studies.
- Many interventions focus on obesity prevention, physical activity, and nutrition, while also exploring screen time as a secondary outcome of interest. Fewer interventions explore screen time reduction as the primary goal.
- Our final results from this review will include the findings from these studies as it pertains to screen time.