Predicting Preschool Children's Screen Time: The Role of Parent's Regulatory Behaviors

Carly Albin, Kathleen S. Wilson, and Vanessa Rigsby
California State University, Fullerton

Active Together Exercise Psych Lab

Introduction

- Children in the U.S. average over four hours of screen time a day (Tandon et al., 2011)
  - This exceeds the recommendation of less than 1-2 hours daily put forth by American Academy of Pediatrics (AAP, 2001)

- Independent of physical activity, a variety of health risks have been associated with screen time among children including obesity (Hancox & Poulton, 2006) and poorer well-being (Hinkley et al., 2014)

- Several reviews have been conducted on correlates of screen-viewing in young children (Hoyos Cillero & Jago, 2010; Duch, et al., 2013)
  - Most of the associations between parent factors and screen time did not show clear patterns in children under 7 years old with the exceptions of parent rules (Hoyos Cillero & Jago, 2010)
  - In children under 3 years old, links between parent factors and screen time were still unclear (Duch et al., 2013)

- Further research is needed to explore the association between parental regulatory behaviors and screen time

Purpose

The purpose of this study was to examine whether parents' regulatory behaviors surrounding screen time would be associated with screen time and parents satisfaction with screen time in their preschool children

Results

Average Daily Sedentary Time

- Average sedentary time was 68.1 min (SD=38.0, Range: 15 to 168.0 min); 46% of the sample met the guideline of less than 1 hour per day

- Parent regulatory behaviors significantly predicted average screen time [R^2=.39, $F_{(4,21)}$=3.4, p=.03]

Table 1. Coefficients predicting daily sedentary time

Predictor	B (SE)	p
TV during meal times	48.9 (16.9)	.009
TV in child's bedroom	54.2 (17.5)	.005
TV rules	-19.1 (19.8)	.345
Track TV	-3.93 (11.1)	.726

Average Satisfaction with Screen Time

- Average satisfaction with screen time was 1.1 (SD=1.1, Range: -1.5 to 3.0)

- The regression predicting parents' satisfaction with screen time approached significance [R^2=.34, $F_{(4,21)}$= 2.7, p=.06]

Table 2. Coefficients predicting satisfaction with screen time

Predictor	B (SE)	p
TV during meal times	-1.01 (0.53)	.069
TV in child's bedroom	-0.95 (0.54)	.096
TV rules	1.23(0.62)	.060
Track TV	-0.17 (0.34)	.630

Methodology

Participants
- 26 parent-child pairs (15 boys & 11 girls; M_{age} = 3.9yrs, age ranged from 2-6y; 22 mothers & 4 fathers)

Design
- As part of a study on parent influences for physical activity, parents answered a questionnaire and completed a daily diary for 10 days

Measures
- Parent regulatory behaviors surrounding screen time were assessed as part of the questionnaire using the following 4 questions:
  1) How much you keep track of the time your child watches TV or videos? (0-*not at all* to 4-*very much so*)
  2) Do you have family rules limiting the number of hours your children watch TV/Videos? (Yes/No)
  3) How often, per week, does your family have the television on during the evening meal? (___ days)
  4) Does your child have a TV in his/her bedroom (Yes/No)
- As part of the daily diary, parents reported:
  - How much time did your child actually spend watching televisions/videos or on the computer today? (_____ minutes or _____ hours)
  - How satisfied were you with the amount of time your child spent watching television/videos or on the computer today? (-3 *very dissatisfied* to +3 *very satisfied*)

Analysis
- Separate multiple regressions were used to predict screen time and satisfaction with screen time
- The predictor variables included:
  - The presence of television (TV) in bedroom
  - The presence of rules limiting use
  - Television use during meals
  - The tracking of television use

Discussion

- It appears that having easy access to television may be an important predictor of preschool children's screen time
  - Television use during mealtime predicted screen time with each additional day adding almost 50 minutes to screen time (49 min)
  - Televisions in children's bedrooms also predicted daily screen time with having a TV in the bedroom added almost 1 hour of TV to the sedentary time (54 minutes)
    - Supports recommendation to remove televisions from children's bedrooms and monitor television use (AAP, 2001)

- In contrast to a previous review (Hoyos Cillero & Jago, 2010), this study did not find an association between parent rules and screen time
  - However, parents appeared more satisfied if they had rules for television use

- Findings extend previous research in two ways:
  1. To reduce screen time, this study suggests the potential of other strategies such as limiting access televisions beyond just parent rules previously identified (Hoyos Cillero & Jago, 2010)
  2. Examines both actual screen time and parents' satisfaction with that screen time.
     - Parent rules associated with satisfaction but not screen time

Limitations
- Correlational design excludes any causal conclusions
- Small sample size (n = 26) limits ability to generalize
  - Seemed to have lower screen time than other studies (Tandon et al., 2011) may be due to being recruited for activity study

Future Directions
- Prospectively examine changes to screen time when access to televisions are restricted (i.e., television removed from bedroom)
- Explore parental influences for other sedentary behaviors such as the use of video games or toys that do not require much movement