Youth Screen Time and Behavioral Health Problems: The Role of Sleep Duration and Disturbances

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ABSTRACT: Objective: The purpose of this study was to examine the indirect effect of youth screen time (e.g., television, computers, smartphones, video games, and tablets) on behavioral health problems (i.e., internalizing, externalizing, and peer problems) through sleep duration and disturbances. Methods: The authors assessed a community sample of parents with a child in one of the following three developmental stages: young childhood (3–7 yrs; N = 209), middle childhood (8–12 yrs; N = 202), and adolescence (13–17 yrs; N = 210). Path analysis was used to test the hypothesized indirect effect model. Results: Findings indicated that, regardless of the developmental stage of the youth, higher levels of youth screen time were associated with more sleep disturbances, which, in turn, were linked to higher levels of youth behavioral health problems. Conclusion: Children who have increased screen time are more likely to have poor sleep quality and problem behaviors.

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The explosion of digital technology ownership in the last 5 years1,2 has created a dramatic shift in how youth and families use technology.3,4 Furthermore, the increased access to new digital media (e.g., smartphones and tablets) devices has contributed to a rapid rise in average screen time exposure for children.4,5 Total daily screen time across devices in children 8 to 18 years old has risen from 5 to approximately 8 hours since 1999,6 far exceeding the American Academy of Pediatrics’ recommendation of 2 hours or less.7

Excessive screen time in childhood is associated with behavioral health problems.8–10 However, the process by which screen time increases these problems has not been elucidated. One potential mechanism of this association is youth sleep quality: there are established individual associations between youth screen time and compromised sleep duration and quality11–13 as well as between sleep and a variety of childhood behavioral health outcomes (e.g., internalizing, externalizing, and peer problems).14–16 The mechanisms by which higher levels of screen time cause sleep disturbances have been attributed to environmental, psychosocial, and biological causes.11–13 One of these environmental sources is the use of screen-based activities, which often delays bedtime or truncates total sleep time.11 One psychosocial source may be arousal due to the content of the media, interfering with the ability to fall and stay asleep.17 And finally, 1 potential biological mechanism is the effect of screen light on both circadian rhythm and alertness.

Although initial support is promising, only 2 studies have examined sleep as a link between screen time and youth behavioral health with both finding some support for sleep duration serving in this role.18,19 Each study had limitations that dampen the generalizability of results and implications for modern families. These include failure to examine sleep quality, which may be a more important marker of sleep than is duration14,20–23; limited assessment of screen time (e.g., during the school day); absence of modern media devices (e.g., tablets, smartphones); limited assessment of behavioral health problems; and narrow age ranges (e.g., middle school children), precluding the examination of differences over the course of child development.14

The purpose of this study was to address the limitations noted above and provide updated information and recommendations to families. We (1) examine both sleep duration and sleep disturbances, a proxy for sleep quality24,25; (2) assess screen time after school for all the primary types of devices children use today (e.g., smartphones, tablets, video games, and laptops); (3) assess internalizing, externalizing, and peer relationship problems; and (4) use a sample of families with a child in one of the following 3 developmental stages: young childhood (3–7 yrs), middle childhood (8–12 yrs), and adolescence (13–17 yrs). These age groups were chosen a priori based on typical age
divisions of prevention and intervention programs that involve parenting as a primary component (e.g., young children; middle childhood; adolescence) to more directly inform the development of programs to help parents manage their children’s screen time at different developmental stages. Of importance, research has long indicated that children have different cognitive skill development and play different roles in the family during these stages of development. We hypothesized that higher levels of screen time would be indirectly related to higher levels of youth behavioral health problems (i.e., internalizing, externalizing, and peer problems) through lower sleep duration and higher levels of sleep disturbance. We hypothesize that these indirect effects would be significant across the three developmental stages.

METHODS
Participants and Recruitment
Parents of 3 to 7 (N = 209), 8 to 12 (N = 202), and 13 to 17 (N = 210) year old children were recruited online through Amazon’s Mechanical Turk (MTurk), the dominant crowdsourcing application in the social sciences. On MTurk, workers browse Human Intelligence Tasks (HITS) by title, key word, reward, availability, and so on and complete HITS of interest. Participants are compensated by requesters on successful completion of tasks (for an introduction to using MTurk). Participation requirements were being a US resident and having at least a 95% task approval rate on MTurk.

Online data collection about screen time has been used successfully, previously. Furthermore, there are several advantages for the use of crowdsourcing methods in clinical and developmental research. First, relatively large sample sizes can be collected quickly for a minimal cost allowing researchers to address unanswered questions, particularly about mechanisms that statistically require large sample sizes. Second, a diverse range of participants (e.g., race, socioeconomic status, household composition) can be recruited from across the United States. Third, previous research has convincingly demonstrated that data obtained via crowdsourcing methods are as reliable as those obtained via more traditional data collection methods. Fourth, previous work has also shown that participation and data quality are unaffected by compensation rate or task length. Fifth, as demonstrated by this study, crowdsourcing methods afford an opportunity to recruit mothers and fathers, the latter being long underrepresented in clinical research. Sixth, crowdsourcing methods use identification numbers, which protects respondent anonymity and prevents any individual worker from participating in a single HIT more than once.

Procedure
All study procedures were approved by the University of Vermont Institutional Review Board. Parents were initially consented online and, after completing surveys, compensated US $4.00. For families with multiple children in the target age range, 1 child was randomly selected through a computer algorithm. Ten attention-check items, placed throughout the survey, asked participants to enter a specific response that changed throughout the survey and appeared randomly. To ensure that responses were not random or automated, participants (N = 2) were excluded from the study if they had more than 1 incorrect response.

Measures
Youth Weekly Screen Time
Parents were asked 2 questions regarding their child’s screen time: “Now thinking about (target child)’s typical activities, on a typical weekday (‘weekend’ in second question) how much time does (target child) spend doing each of the following at home?” Parents responded with the number of hours and/or minutes their child engaged in each of the following activities: (1) watching TV or DVDs; (2) using the computer; (3) playing video games on a console game player (such as: Xbox, PlayStation, Wii); (4) playing on a handheld game console, such as a Gameboy, PSP, or DS; (5) using a tablet computer (such as iPad); and (6) using a smartphone for playing games, watching videos, or surfing the Internet (not including time spent talking on the phone). A daily use (averaged across the weekend and weekday) was calculated by device and then summed across all devices. Because of outliers’ 2 standard deviations above the mean that were beyond possible daily totals, such values were winsorized and assigned the highest value at 2 standard deviations. The method used in this study to measure child screen time was similar to those used by major industry reports and peer-reviewed research.

Sleep Disturbances and Duration
An abbreviated version of the Children’s Sleep Habit Questionnaire (CSHQ) was used to measure youth sleep disturbances and duration. The CSHQ is a widely used parent-report questionnaire to screen for childhood sleep problems and has been shown to be highly correlated with objective measures sleep functioning such as actigraphy. Parents rated the frequency of sleep behavior for the most recent “typical” week on a 4-point Likert scale, with the response options usually (5–7 times per week), sometimes (2–4 times per wk), rarely (0–1 time per wk), and never (less than once a week). A higher score indicates more sleep disturbances. Seven items were chosen to measure sleep disturbances across several domains: daytime sleepiness (“falls asleep while involved in activities”), daytime fatigue (“seems tired during the day”), sleep efficiency (“wakes up during the night”), continuity of sleep (“is restless and moves a lot during sleep”), consistency of sleep (“sleeps about the same amount each day” and “goes to bed at the same time at night”), and sleep latency (“falls asleep within 20 minutes after going to bed”). Items were scored such that higher scores represented more sleep disturbances (current α = .72). To measure sleep duration, parents
reported what time their child typically goes to sleep on
evenings and weekend nights separately, and what
time they typically wake up on weekdays and weekend
days. From these, the amount of sleep was calculated by
multiplying the weekday totals by 5 (days), adding it to
the weekend totals multiplied by 2, and dividing the total
by 7 to indicate average daily sleep duration.

Youth Internalizing and Externalizing Problems

The parent form of the 19-item Brief Problem Monitor
(BPM) measured 2 indices of youth behavioral health
problems: internalizing and externalizing problems. BPM
items were selected from the Child Behavior Checklist
and Youth Self-Report using item response theory and
factor analysis. The internal consistency, test-retest
reliability, and validity of the BPM are excellent, Each
item is rated on a 0 to 2 scale (0 = not true, 1 = somewhat true, or 2 = very true). Higher scores indicate
more internalizing (current $\alpha = .72$) or externalizing
(current $\alpha = .72$) problems.

Peer Problems

For the third indicator of behavioral health problems,
the peer problem subscale of the Strengths and Difficulties
Questionnaire was used. Responses to each of the 5
peer problem items (e.g., playing alone; being bullied and
generally not liked by other children) were rated on
a 3-point Likert scale (0 = not true, 1 = somewhat true, or
2 = certainly true). Psychometric properties are well
established. Higher scores indicate more peer problems
(current $\alpha = .72$).

Data Analytic Plan

Evaluation of the Structural Model

Path analysis to test the hypothesized structural model
was conducted with Mplus 6.0 software. Because
previous research recommends examining sleep duration
and problems separately, models were run in
dividually with sleep disturbances and then with sleep
duration as the link between screen time and behavioral
health problems. The following fit statistics were used to
evaluate model fit: Chi-square ($\chi^2$, $p < .05$ excellent),
comparative fit index (> .90 acceptable, > .95 excellent),
root mean square error of approximation (< .08 acceptable,
< .05 excellent), and the standardized root mean
square residual (< .08 acceptable, < .05 excellent). As
missing data were less than 1% overall for all core
variables, full information maximum likelihood estima-
tion techniques were used for inclusion of all available
data. The Model Indirect command in Mplus was used to
calculate a standardized indirect effect parameter and
biased-corrected bootstrap confidence intervals. Addi-
tionally, the ratio of the indirect effect to the total effect
($ab/c$) for each significant indirect effect test was calculated.

Covariates

Although not included in the proposed conceptual
model, the effects of youth gender, parent marital
status (1-parent family vs 2-parent), and family in-
come on the model were examined by running
a multiple-indicator/multiple-cause model in which all
major constructs of the final model were regressed on
the covariates separately. If paths in the structural model
remained significant with the inclusion of these covari-
tes, it was concluded that the control variables did not
influence the relations among variables in the model.

Secondary Analyses

To facilitate recommendations for families on how
many hours of youth screen time is disruptive for sleep
(i.e., disturbances and duration), 1-way analysis of vari-
ance with 6 levels of screen time (0–2 hrs as recom-
mended by American Academy of Pediatrics; 2.1–4 hrs;
4.1–6 hrs; 6.1–8 hrs; 8.1–10 hrs; and 10.1 hrs or more)
was conducted with sleep disturbances and duration as
the dependent variables.

RESULTS

Primary Analyses

Sample demographics by developmental stage (young
childhood, middle childhood, and adolescent samples)
are presented in Table 1.

The multiple-group function in Mplus was used to
determine model fit across all 3 developmental stages,
but paths in the model were freely estimated by youth
developmental stage. When sleep disturbances were in-
cluded in the model, direct paths from youth screen time
to behavioral health problems were nonsignificant
across all developmental stages and thus these paths
were dropped to determine model fit. This final
model demonstrated excellent fit, $\chi^2 (9, N = 613) = 10.73, p > .15$, root mean square error of approximation
(RMSEA) = .03, 95% confidence interval (CI), 0.00–0.088,
comparative fit index (CFI) = 1.0, standardized root mean
square residual (SRMR) = 0.03, and is displayed by each
child developmental stage in Figure 1. The standardized
estimates of direct and indirect effects are presented in
Table 2 along with bias-corrected bootstrap CIs for all
effects for each of the 3 developmental stages.

The statistically significant standardized estimates of
pathways in the sleep disturbances model (Fig. 1) were
consistent across all 3 developmental stages: as predicted,
higher levels of youth screen time were associated with
higher levels of sleep disturbances, which, in turn, were
related to higher levels of internalizing, externalizing, and
peer problems. Furthermore, the indirect effect of youth
screen time on youth internalizing, externalizing, and
peer problems through sleep disturbances was significant
across all developmental stages (Table 2). The ratio of the
indirect effect to the total effect for youth screen time on
problem behaviors for the young, middle, and adolescent
children ranged from 33% to 50% for internalizing
problems, from 33% to 89% for externalizing problems, and
from 44% to 98% for peer problems.

Multiple-indicator/multiple-cause (MIMIC) models
tested the demographic effects of youth gender, parent
marital status, and family income on the associations in
the model for each age group. All the major constructs of
the model were regressed on the control variables separately. All paths in the structural model across all three samples were largely unaffected (i.e., remained significant without large reductions in effect size) by the inclusion of these control variables; thus, it was concluded that the control variables did not influence the original relations among variables in the model.

Next, the model was run with sleep duration in the model instead of disturbances. This model demonstrated excellent fit, $\chi^2 (9, N = 613) = 13.89, p > .10, \text{ RMSEA} = 0.05, 95\% \text{ CI}, 0.00-0.10, \text{ CFI} = 0.98, \text{ SRMR} = 0.04$ (Table 2 presents standardized estimates and 95% CIs). Youth screen time was related to sleep duration for young and middle childhood, but not for adolescence.
Sleep duration was only related to youth externalizing problems in middle childhood; all other paths from sleep duration to behavioral health outcomes were not significant. This model was not considered further (e.g., MIMIC models were not tested).

Secondary Analyses

The bottom of Table 1 shows overall mean screen time and percentage of sample in each category. To examine how many hours of screen time is disruptive for sleep, sleep disturbances initially and then duration served as a dependent variable and 6 levels of youth screen time served as the independent variable in an analysis of variance. A significant effect emerged for young childhood ($F[5, 203] = 5.243, p < .05$) and adolescence ($F[4, 199] = 3.74, p < .01$), but not for middle childhood ($F[5, 194] = .60, p > .10$); however, the pattern of mean values for middle childhood is consistent with that for the adolescent sample. Contrasts were performed to examine the significant differences.

Table 2. Standardized Estimates for the Final Structural Model by Youth Developmental Stage

<table>
<thead>
<tr>
<th>Paths in the Model</th>
<th>Young</th>
<th>Middle</th>
<th>Adolescence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep disturbances</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screen time—sleep disturbances</td>
<td>0.17 (0.04 to 0.30)</td>
<td>0.15 (0.02 to 0.29)</td>
<td>0.23 (0.10 to 0.36)</td>
</tr>
<tr>
<td>Sleep disturbances—internalizing problems</td>
<td>0.29 (0.16 to 0.41)</td>
<td>0.39 (0.28 to 0.51)</td>
<td>0.37 (0.25 to 0.49)</td>
</tr>
<tr>
<td>Sleep disturbances—externalizing problems</td>
<td>0.39 (0.27 to 0.50)</td>
<td>0.47 (0.37 to 0.58)</td>
<td>0.38 (0.26 to 0.50)</td>
</tr>
<tr>
<td>Sleep disturbances—peer problems</td>
<td>0.30 (0.17 to 0.42)</td>
<td>0.31 (0.19 to 0.44)</td>
<td>0.29 (0.17 to 0.42)</td>
</tr>
<tr>
<td>Screen time IND internalizing problems</td>
<td>0.05 (0.004 to 0.09)</td>
<td>0.06 (0.004 to 0.12)</td>
<td>0.08 (0.03 to 0.14)</td>
</tr>
<tr>
<td>Screen time IND externalizing problems</td>
<td>0.07 (0.01 to 0.12)</td>
<td>0.07 (0.01 to 0.14)</td>
<td>0.09 (0.03 to 0.15)</td>
</tr>
<tr>
<td>Screen time IND peer problems</td>
<td>0.05 (0.01 to 0.09)</td>
<td>0.05 (0.001 to 0.10)</td>
<td>0.07 (0.02 to 0.12)</td>
</tr>
<tr>
<td>Internalizing WITH externalizing</td>
<td>0.25 (0.12 to 0.38)</td>
<td>0.45 (0.34 to 0.56)</td>
<td>0.21 (0.08 to 0.35)</td>
</tr>
<tr>
<td>Internalizing WITH peer problems</td>
<td>0.23 (0.10 to 0.35)</td>
<td>0.34 (0.22 to 0.47)</td>
<td>0.45 (0.34 to 0.56)</td>
</tr>
<tr>
<td>Externalizing WITH peer problems</td>
<td>0.03 (−0.11 to 0.16)</td>
<td>0.29 (0.16 to 0.41)</td>
<td>0.24 (0.12 to 0.37)</td>
</tr>
<tr>
<td>Sleep duration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screen time—sleep duration</td>
<td>−0.29 (−0.48 to −0.10)</td>
<td>−0.53 (−0.71 to −0.36)</td>
<td>0.14 (−0.01 to 0.29)</td>
</tr>
<tr>
<td>Sleep duration—internalizing problems</td>
<td>−0.05 (−0.20 to −0.11)</td>
<td>−0.06 (−0.21 to −0.08)</td>
<td>−0.01 (−0.16 to −0.14)</td>
</tr>
<tr>
<td>Sleep duration—externalizing problems</td>
<td>−0.10 (−0.24 to −0.04)</td>
<td>−0.22 (−0.38 to −0.06)</td>
<td>−0.09 (−0.23 to −0.05)</td>
</tr>
<tr>
<td>Sleep duration—peer problems</td>
<td>−0.06 (−0.18 to −0.06)</td>
<td>−0.05 (−0.21 to −0.11)</td>
<td>0.15 (−0.01 to 0.31)</td>
</tr>
<tr>
<td>Internalizing WITH externalizing</td>
<td>0.33 (0.17 to 0.48)</td>
<td>0.55 (0.43 to 0.68)</td>
<td>0.32 (0.18 to 0.47)</td>
</tr>
<tr>
<td>Internalizing WITH peer problems</td>
<td>0.29 (0.15 to 0.43)</td>
<td>0.42 (0.29 to 0.55)</td>
<td>0.51 (0.39 to 0.64)</td>
</tr>
<tr>
<td>Externalizing WITH peer problems</td>
<td>0.13 (−0.04 to 0.30)</td>
<td>0.39 (0.24 to 0.53)</td>
<td>0.35 (0.22 to 0.47)</td>
</tr>
</tbody>
</table>

CIs that do not contain zero can be considered statistically significant. CI, confidence interval; IND, indirect effect.
FIGURE 2. Estimated mean values for sleep disturbances and duration by youth screen time.

between screen time categories (Fig. 2 presents estimated sleep disturbance mean values by screen time category). For middle childhood and adolescence, although only significant in adolescence (p < .01), 10+ hours of screen time is associated with higher levels of sleep disturbances than all other levels of screen time. In contrast, for young childhood age, a steep increase in sleep disturbances begins after 6 hours of screen time (p < .05) and increases again after 8 hours (p < .01).

When sleep duration served as the dependent variable, a significant effect emerged for young childhood (F [5, 202] = 2.8, p < .05) and middle childhood (F [5, 194] = 12.05, p < .001), but not for adolescence (F [4, 199] = .19, p > .10) (Fig. 2 presents estimated sleep duration mean values by screen time category). For the middle childhood sample, sleep duration was not different for 0 to 2 and 2.1 to 4 hours of screen time (p > .15), whereas, after 4 hours of screen time, sleep duration decreased significantly with each 2-hour increase in screen time (all p < .05). A similar pattern of effects emerged for the young childhood sample; sleep duration was not different for 0 to 2, 2.1 to 4, and 4.1 to 6 (all p > .05) but decreased for each 2-hour increase in screen time afterward (all p < .05).

DISCUSSION

This study examined the indirect effect of youth screen time on behavioral health problems through sleep duration and disturbances. Findings indicated that, regardless of the developmental stage of the youth, higher levels of youth screen time were associated with more sleep disturbances, which, in turn, were linked to higher levels of youth internalizing, externalizing, and peer problems. Contrary to expectation, sleep duration only served to link screen time to behavioral health problems for externalizing problems in middle childhood.

The consistency of findings for sleep disturbances across developmental stages ranging in age from 3 to 17 years provides substantial support for the roles of youth screen time and sleep disturbances in youth behavioral health problems. Beyond the significant links in the model, the effect size of the indirect effect from youth screen time to all 3 types of behavioral health problems through sleep disturbances was substantial at each developmental stage. As most research has focused on young children, the findings for older children and adolescents are particularly important.

Secondary analyses provided additional data to facilitate recommendations for families on how many hours of youth screen time is disruptive for sleep. At all three developmental stages, average screen time is substantially above that recommended by American Academy of Pediatrics but comparable with major industry reports. For young children, sleep disturbances seem to emerge after 6 hours of daily screen time, whereas, for middle childhood and adolescence, these disturbances increase only at high levels of daily screen time use (10 hrs or more). Sleep duration seems to decrease progressively after 4 or 6 hours of daily screen time for preadolescents. Because both duration and quality of sleep are important for children and adolescents, the findings suggest that for preadolescents screen time above 4 to 6 hours daily is disruptive and for adolescents screen time above 10 hours daily is disruptive. Of importance, the findings are limited to sleep; higher levels of screen time may disrupt functioning in other areas (e.g., academic performance).

Because sleep hygiene is important in the treatment of behavioral health difficulties, the present findings suggest that practitioners should assess for youth screen time and, if appropriate, include recommendations to reduce children’s screen time. Because the adoption of mobile media devices continues to grow, it will be particularly important to provide parents with effective strategies for managing their child’s screen time (e.g., technology-specific parenting strategies).

There are several limitations of this study. First, the data are cross-sectional, raising questions about the direction of effects and temporal precedence that are better addressed by longitudinal designs. Second, because of the crowdsourcing methodology, all variables in the model were from a single reporter. Because this is a potential issue of shared method variance and parent’s reports of adolescent sleep and internalizing may be biased, the use of multiple reporters and methods (e.g., actigraphy) on constructs of interest could strengthen confidence of findings in future work. Third, we did not separate out weekend from weekday screen time and sleep. These are important topics for families; however, research has not yet addressed weekday versus weekend...
measurement of these constructs. Research designs using daily-dairy or ecological momentary assessment methodologies will be well suited to examine the roles weekday versus weekend assessment plays. Fourth, our assessment of youth screen time did not account for overlapping use of multiple devices. Although our average screen time hours were in line with major industry reports, future research should take into account potential device overlap and examine if simultaneous use of multiple devices further increases risk for behavioral health problems. Furthermore, screen time outside the home (e.g., friend’s home) was not considered in our assessment. Fifth, this study did not include self-reported medical or behavioral health issues (e.g., attention-deficit hyperactivity disorder). This is an important potential confounder and future research should include this information as potential covariates. Additionally, our assessment of sleep disturbances and youth problem behavior used measures not yet validated for children younger than 6 years.

Sixth, the online nature of participant recruitment in this study precludes the examination of parents who may not use the Internet, possibly as a result of their perceptions of technology. Given that approximately 15% of adults in the United States do not use the Internet, it will be important in future research to include these families. Seventh, this study’s focus on negative effects of screen time precluded the examination of potential positive effects of screen time. For example, the importance of technology for a child’s academic success provides a source of unique tension for parents as they attempt to balance the positive and negative effects of screen time. Future research should incorporate positive effects of screen time, such as academic success, as an additional potential outcome associated with child screen time. Eighth, our measure of sleep disturbances was an abbreviated version of the full Children’s Sleep Habit Questionnaire. Although most items and subscales from this measure were not of interest to the current investigation, further research on the validity of the brief version is needed. Ninth, future research will benefit from using objective methods of assessing sleep duration and quality.

An additional limitation of the current investigation is the simplification of the process by which high levels of screen time influence sleep and problem behaviors. Although necessary for initial stages of inquiry into this growing topic of research, future research should seek to examine the mechanisms involved for each pathway in the current model and do so with the child’s developmental stage as a central context. For example, it is plausible that the mechanisms by which high levels of screen time are related to sleep disturbance, which in turn is related to behavioral health, would differ depending on the child’s developmental stage. For example, adolescents may engage in screen time rather than sleeping, whereas young children may be overstimulated by the games and, therefore, have a more difficult time settling in when it is time to sleep. Furthermore, a developmentally informed approach to identifying mechanisms of influence will greatly enhance both breadth and confidence in findings as well as the broad scale generalizability of findings to families and children.

**CONCLUSION**

The use of mobile media devices continues to increase in childhood. The current findings suggest that excessive screen time is associated with reduced sleep duration in the preadolescent years and sleep disturbances in age groups ranging from 3 to 17 years. In turn, sleep disturbances, and to a lesser extent duration, are associated with behavioral health problems. Effective interventions to decrease screen time need to be developed and tested for their effects on these negative outcomes. Once mechanisms have been identified within and across children at different developmental stages, interventions targeting these mechanisms can be designed and implemented. Potential targets for intervention may include psychoeducation for both the parent and child regarding the consequences of excessive screen time, as well as targeting screen time indirectly through interventions aimed at improving parental efficacy when managing this behavior.

**REFERENCES**


