



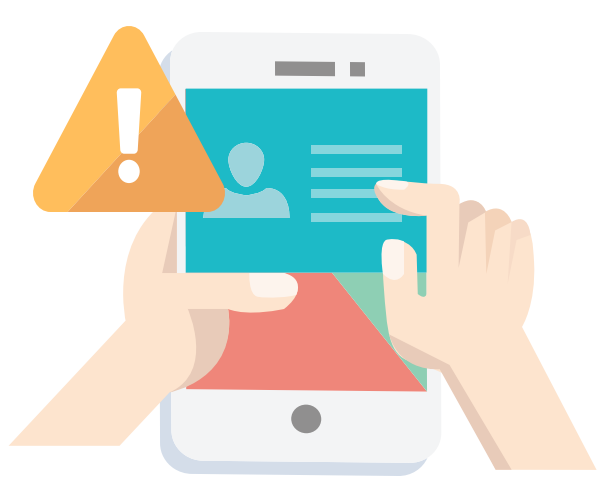
i-Preschooler Study

How long do preschool children use digital media and how does the use of digital media affect their quality of life?

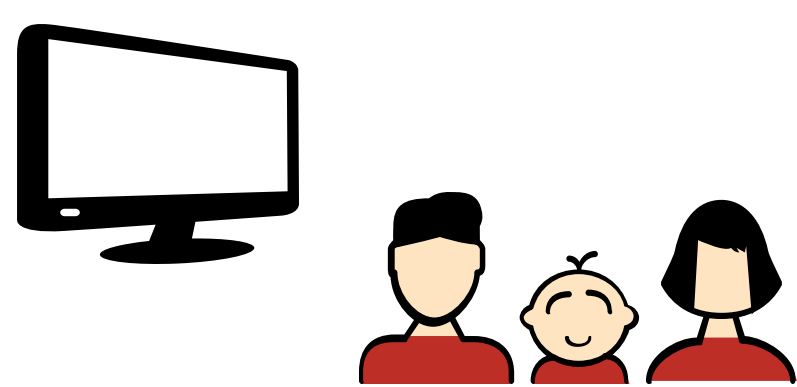
What does research tell us?

- Children in Asia use digital media a lot in their daily lives because of the ubiquity of mobile technologies (Asianparent Insight, 2014).
- Many digital habits are cultivated in early childhood even before speech is developed (Chia, Chua, Komar & Lua, 2020).
- Sleep, exercise, play, and other forms of off-screen activities are important and should not be displaced by media use (American Academy of Pediatrics [AAP] Council on Communications and Media, 2016).
- Benefits of digital media use should outweigh its demerits for the holistic development of preschool children (AAP, 2016).
- Exercise caution and concern for the negative consequences of excessive digital media use in preschool children. These consequences include:
 - (a) a habit of sitting or lying down for long periods of time;
 - (b) screen use becoming prolonged and overpowering;
 - (c) an increased risk of obesity and other metabolic conditions like diabetes; and
 - (d) a lack of good quality sleep and issues with poor eyesight.

Professional Guidelines on Child Digital Media Use



Limit screen time to no more than 1 hour a day for children aged 2-5 years



Parents or caregivers should co-view or co-play digital media with child



Introduce only high-quality educational programs

(AAP, 2016b)

References:

- Asianparent Insight (2014). Mobile Device Usage Among Young Kids – A Southeast Asia Study. Retrieved from <https://s3-ap-southeast-1.amazonaws.com/tap-sg-media/theAsianparent+Insights+Device+Usage+A+Southeast+Asia+Study+November+2014.pdf>
- Chia, Chua, Komar & Lua (2020) Associations between parent attitudes and on- and off-screen behaviours of preschool children *Early Childhood Education Journal* (currently under review)
- AAP Council on Communications and Media. (2016). Media and young minds. *Pediatrics*, 138(5), e20162591.
- American Academy of Pediatrics. (2016b) *American Academy of Pediatrics Announces New Recommendations for Children's Media Use*. Retrieved from <https://services.aap.org/en/news-room/news-releases/aap/2016/aap-announces-new-recommendations-for-media-use/>
- MOE (2017) *Teaching and Learning Guidelines on the Use of Information and Communication Technology (ICT) in Pre-school Centres*. Retrieved from [https://www.nel.moe.edu.sg/qql/slot/u143/Resources/Downloadable/pdf/\(MOE\)ICT%20Guidelines_Final.pdf](https://www.nel.moe.edu.sg/qql/slot/u143/Resources/Downloadable/pdf/(MOE)ICT%20Guidelines_Final.pdf)
- Media Literacy Council. *Resources for Parents*. Retrieved from <https://www.betterinternet.sg/Resources/Resources-Listing?topic=screen+time&persona=parents>

Contributors:
Michael Chia,
Professor
michael.chia@nie.edu.sg

Kalaivani Ramachandran
Research Assistant
kalaivani.ramachandran@nie.edu.sg

Terence Chua
Research Assistant
terence.chua@nie.edu.sg

What is the iPreschooler study about?

The study examined the connections between screen time, parents' attitudes towards their child's digital media use and quality of life among preschool children in Singapore. Nearly 4500 parents of children aged 2 to 6 years enrolled in government-subsidized preschools were recruited. *An online questionnaire package (SMALLQ[®] and PedsQL[™]) were sent out to parents through the preschools at 2 time-points each 12 months apart (2018 and 2019).

* SMALLQ[®] is an acronym for Surveillance of digital Media hAbits in EarLy chiLdhood Questionnaire, c/o Professor Michael Chia and PedsQL[™] is an acronym for Pediatric Quality of Life, c/o J. W. Varni (1998)

What did we find?

Children who are heavy users of digital media (more than 3 hours a day)...

1



have poorer quality of life*



have less sleep

than children who are light users of digital media (less than an hour a day).

* Constructs of quality of life measured were physical functioning, psychosocial functioning, and school functioning.

2

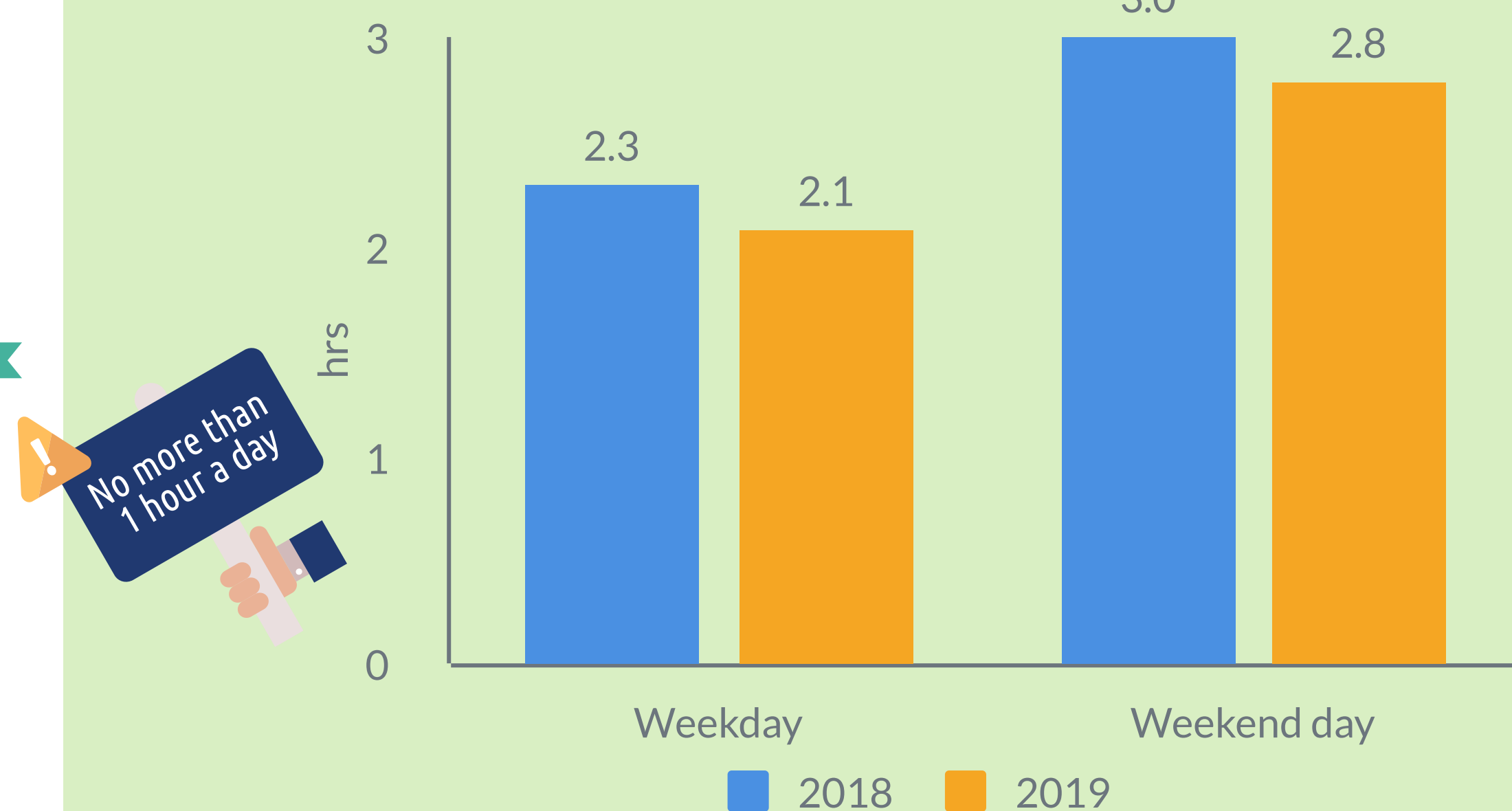
Average age of child's first exposure to
(a) fixed screens: 19.7 months
(b) mobile screens: 24.6 months

3

Mobile screens are increasingly common-
97.2% of parents reported owning a
mobile device.

Child screen time in 2019 dropped but still exceeded the recommended duration of no more than 1 hour a day.

4



63% (1.3hrs) and 65% (1.8hrs) of screen time were spent on entertainment on a weekday and on a weekend day, respectively.

5

Parent screen use is moderately associated with child screen use ($r= 0.45$).
More than 50% of children use digital media unaccompanied.



6

Parents of children who are heavy users of digital media are less likely to enforce screen media use guidelines compared to parents of children who are light users of digital media.

% of parents who enforced the guidelines among...

Guidelines enforced	Children who are heavy users		Children who are light users
Limit screen time to 1hr a day for children 2-5 years old	45.3%	<	81.9%
Introduce only high-quality educational programs	60.1%	<	71.7%
Co-watch or co-play digital media with child	76.7%	<	77.2%

What does it mean for teaching and learning?

Recommendations for teachers:

Use of technology for teaching and learning

Given that children may be heavy users of digital media at home, exposure and use should be carefully considered such that they:

- Complement children's learning experiences and are developmentally appropriate.
- Facilitate and guide children's experiences with technology.
- Prioritize the safety and well-being of children.

(MOE, 2017, pp. 2)

Partnership and communication with parents

- Teachers could recommend the following to parents:
 - Delay free and unaccompanied access and ownership of mobile screens for young children.
 - Limit total daily screen time to no more than 60 minutes.
 - Model positive non-screen behaviours for preschool children with lots of parent-child interactions.
 - Have more play activities, especially outdoor play daily.
 - Balance on-screen and off-screen habits for the holistic development of children.
 - Refer to useful tips and guides on digital parenting (eg. Clique Click) which can be found on the Media Literacy Council's website.
- Teachers could also invite parents to share ideas with other parents on how they can limit screen time and cultivate quality in-person interactions at home. This may help to encourage other parents to do the same.

To learn more about the research, please contact Professor Michael Chia at michael.chia@nie.edu.sg or visit the website www.iissaar.com