

Digital (dis)connection and digital well-being

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School Innovation Forum

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Meso level

Individual level

Smartphone use in families

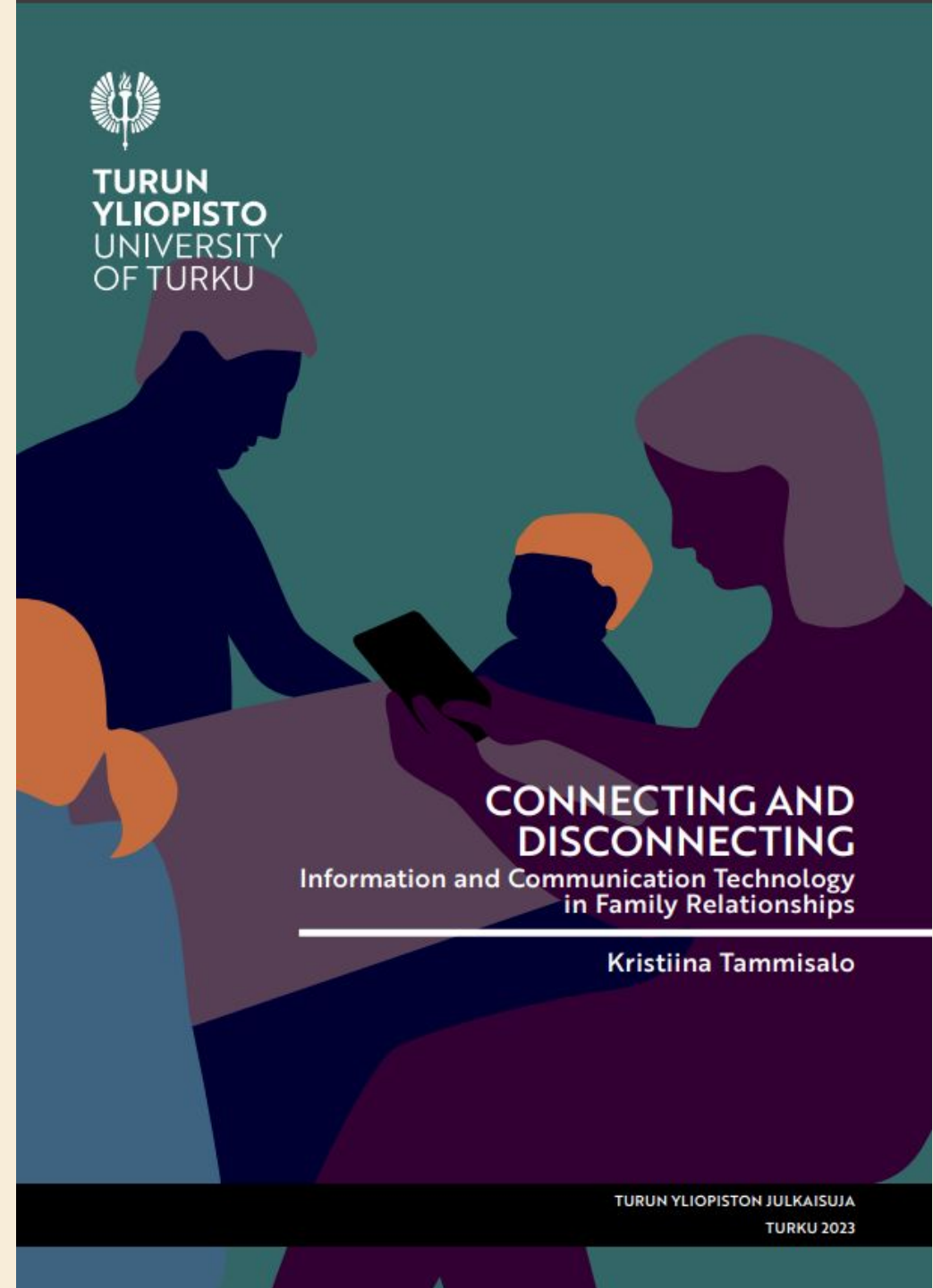


1

Main results of my phD

1. ICT can benefit relationships through improved connectivity
2. ICT can undermine relationships through displaced interaction
3. Negative effects more prevalent because most of screen time is the displacing type

<https://www.utupub.fi/bitstream/handle/10024/175931/Tammisalo%20DISS.pdf?sequence=1&isAllowed=y>



Systematic review of 73 studies

Relationship types:

- Parent-child, parents, siblings

Independent variables:

- Different types of ICT use, personal use, co-use, communication

Outcomes:

- Relationship quality, intimacy, time spent together, communication frequency, etc..


<https://journals.sagepub.com/doi/abs/10.1177/02654075221087942>

Effects of information and communication technology on the quality of family relationships: A systematic review

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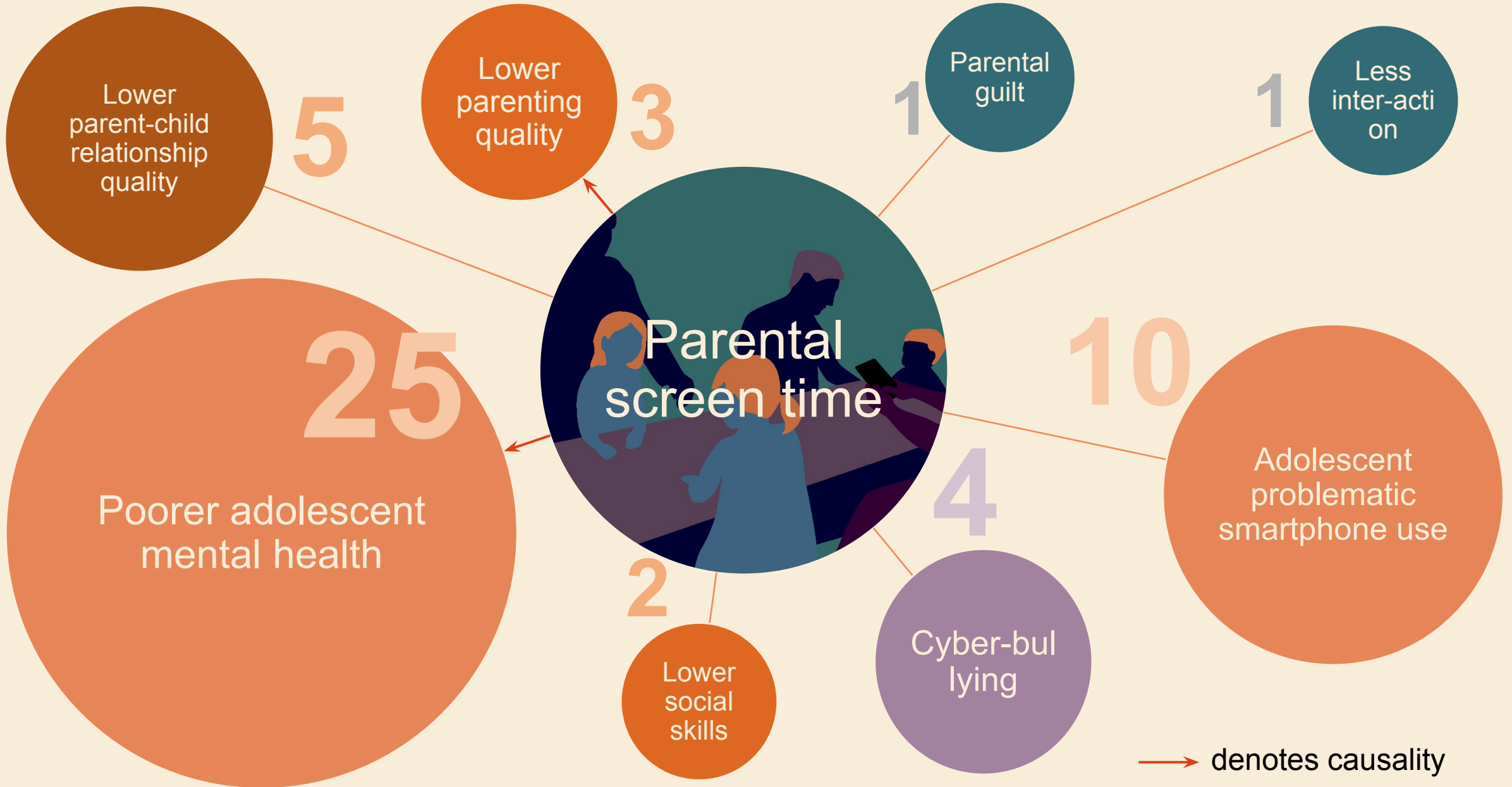
Abstract

Information and communication technology (ICT) facilitates communication within families but may also displace face-to-face communication and intimacy. The aims of this systematic review were to investigate what positive and negative relationship outcomes are associated with ICT use in families, and whether and how the outcomes differ depending on relationship type (romantic relationship, parent–child relationship, or sibling). Included in the review were research published in English between 2009 and 2019 studying the effects of ICT on family relationships with quantitative data. 70 peer-reviewed articles (73 studies) were retrieved and categorized based on four types of ICT variables: personal use, personal use in the presence of a family member (technoference), communication between family members, and co-use with family members. Personal use and technoference were mostly related to negative outcomes due to, for example, displaced attention and more frequent conflicts. Romantic partners were especially

Parental technoference reviews 2020-2025

Authors	Year	Studies	Age group	Outcomes	No of studies
Arnaudeau et al.	2024	2002-2022	0–18	Parent-child relationship quality and child development	42
Braune-Krickau et al.	2021	2017-2020	0–6	Parenting quality	12
Dixon et al.	2023	2018-2021	10–19	Child and adolescent mental health	13
Hood et al.	2021	2020	0–18	Attachment	2
Knitter et al.	2020	2007-2019	0–18	Parent-child interaction	21
Komanchuk et al.	2023	2008-2021	0–18	Parent-child relationship quality and child development	64
Lin et al.	2024	2018-2023	Mean 14.5	Child and adolescent mental health	15 (n=22478)
Mikić et al.	2022	2010-2021	0–3	Parent-child interaction and child development	22
Tammisalo & Rotkirch	2022	2012-2019	0–18	Parent-child relationship quality	9
Toledo-Vargas et al 2025	2025	2017-2024	0-5	Health and development	30 (n=16 383)

Parental screen time and outcomes for adolescents (13+) and the parent (57 studies)



Smartphone bans in schools

2

Intense social development in the school years

”Brain circuits that are used get stronger”

- Through social interaction children learn empathy, coordinated action, conflict resolution and about their social identity
- Trust between individuals is built through face-to-face interaction (Dunbar 2021, Sutcliffe et al. 2012)
- Being ”social” online does not support well-being like offline socializing (Helliwell et al. 2013)



Dunbar, R. 2021. *Friends: Understanding the Power of our Most Important Relationships*. Little, Brown, UK.

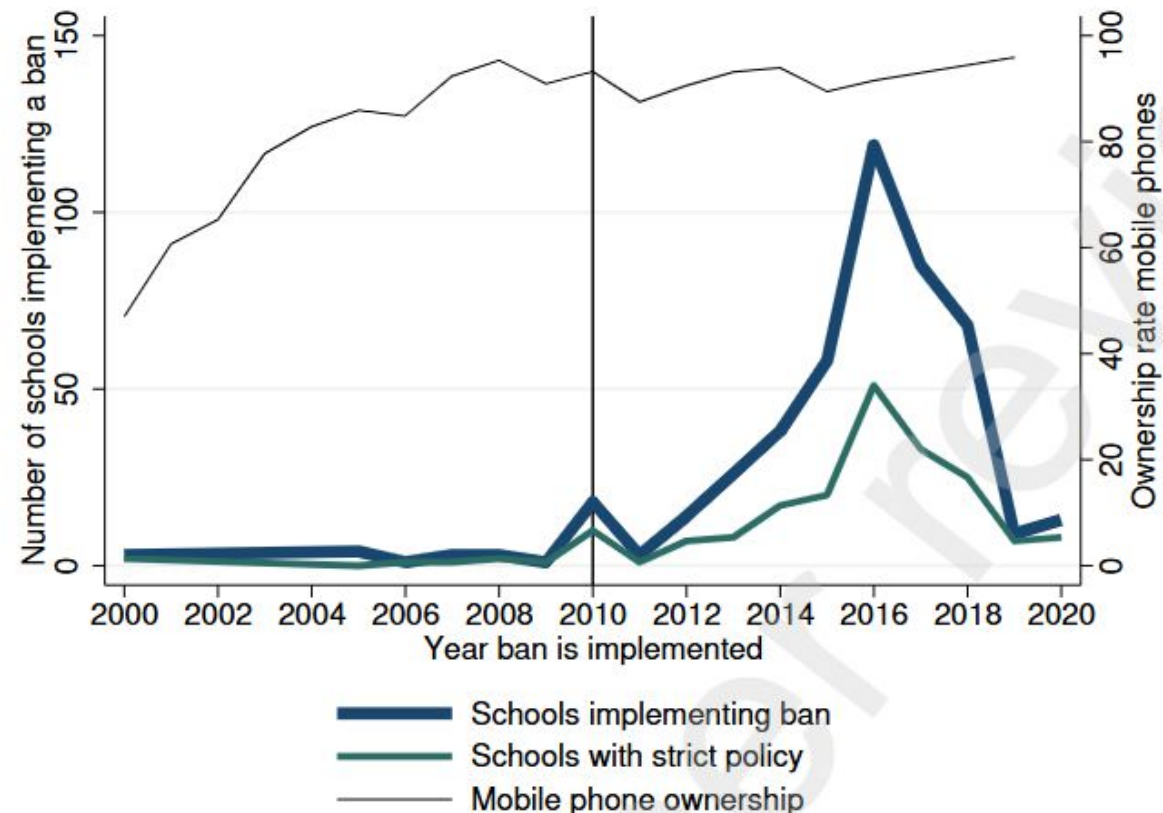
Helliwell, J. F. and Huang, H. 2013. Comparing the happiness effects of real and on-line friends. *PloS one*, **8**, 9, e72754.

Sutcliffe, A., Dunbar, R., Binder, J. and Arrow, H. 2012. Relationships and the social brain: integrating psychological and evolutionary perspectives. *British journal of psychology*, **103**, 2, 149–68.

Smartphone Bans in Norwegian Schools

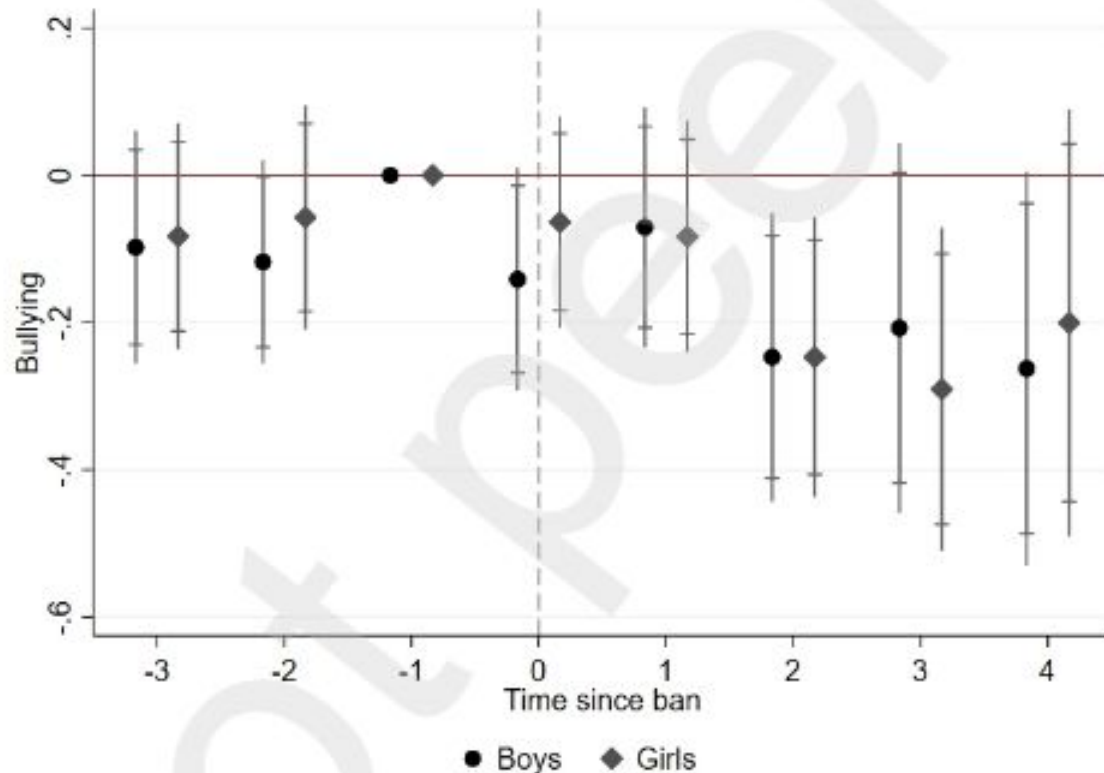
Abrahamsson, Sara (2024)

Figure 1: Introduction of Smartphone Bans Over Time at Middle Schools



Smartphone Bans, Student Outcomes and Mental Health (Abrahamsson, S. 2024)
Available at SSRN: <https://ssrn.com/abstract=4735240>

Effects of smartphone bans on bullying



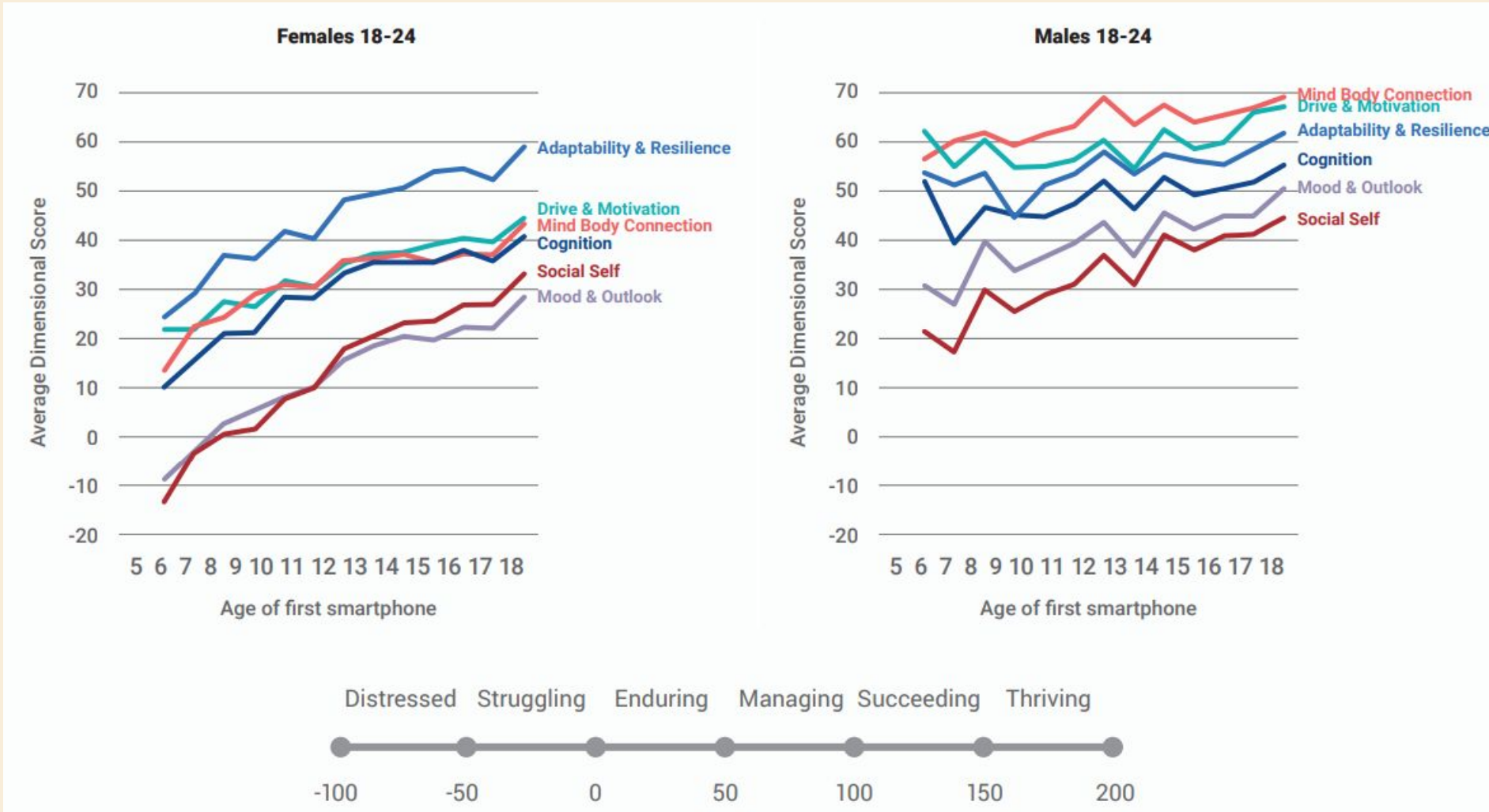
Bullying decreased after implementation of ban
(Olweus scale)

- 3-4 years after implementation, 43-46 % decrease in bullying in both girl and boys

Take-home message

3

Age of first smartphone and mental health

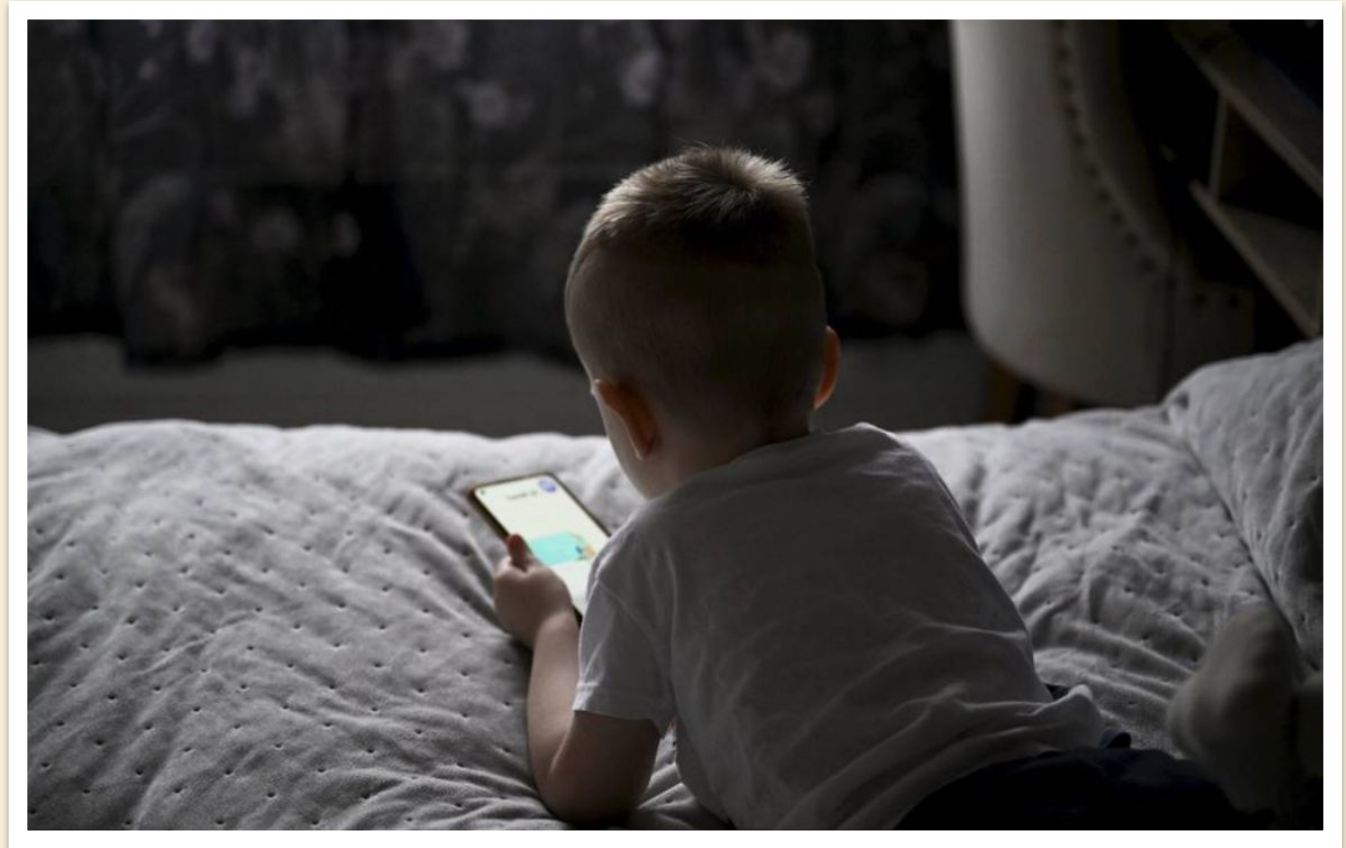


Global Mind Project
2023 data
(41 countries across
North America, Europe,
Latin America, Oceania,
South Asia, and Africa.)

N = 27,969

Promoting children's digital well-being

1. Change in norms around age-appropriate technologies:
 1. Smartphones
 2. Platforms using engagement maximising features
 3. Open access to the internet
 4. Platforms allowing contacts from strangers
2. Data, research and evidence-based decisions
3. Adopting a precautionary approach
4. Assigning responsibility to the tech industry

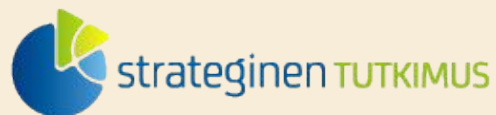


Opportunities for rich face-to-face interaction in school and at home

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Bonus slides

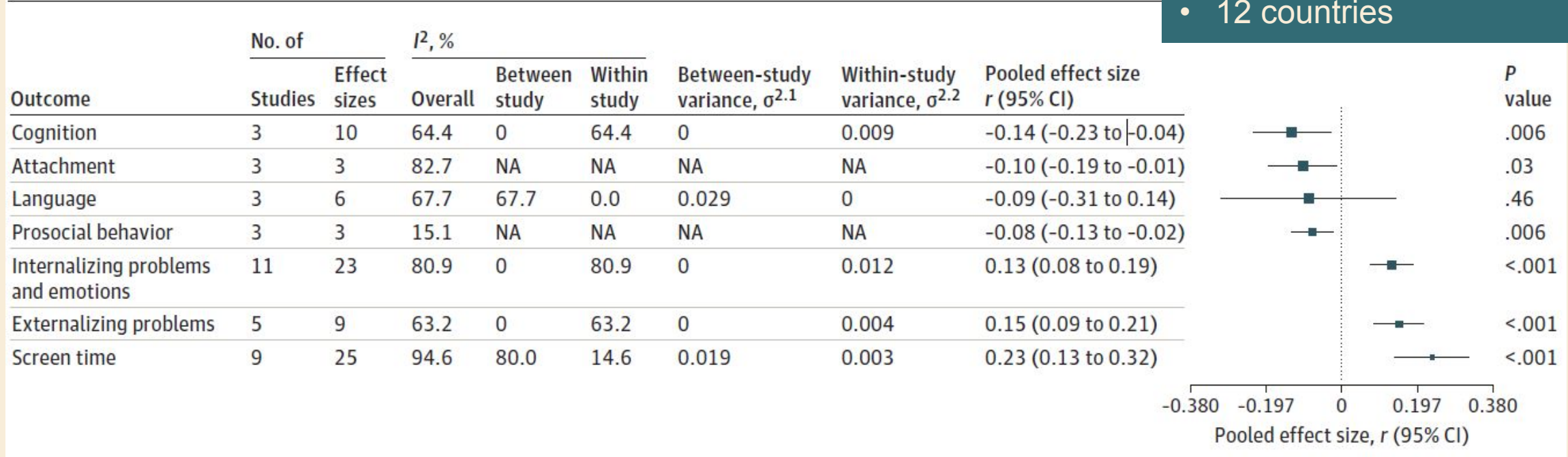
Parental Technology Use in a Child's Presence and Health and Development in the Early Years

A Systematic Review and Meta-Analysis

Toledo-Vargas, et al. (2025)

- 30 studies
- 21 study meta-analysis
- Published 2017–2024
- Participants 16 383
- 0-5-year-olds
- 12 countries

Figure 2. Findings From Meta-Analyses of the Association of Parental Technology Use in a Child's Presence and Their Health and Development Outcomes



Parental screen time and outcomes for 7–12-year-old children and the parent (14 studies)

