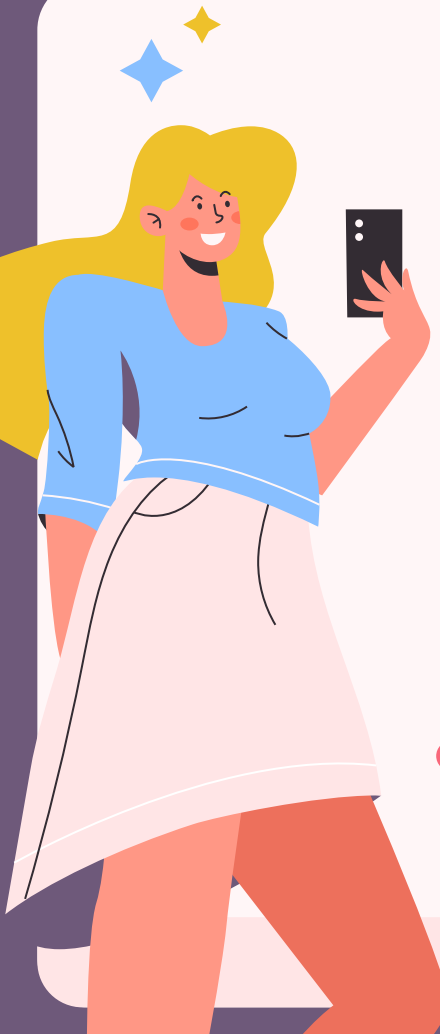
Always On: How Social Media and Smartphones Affect Young People's Sleep and Mental Health

Dr Emma Sullivan
Department of Psychology
University of York





Acknowledgements



Professor Lisa Henderson



Professor Bernadka Dubicka (HYMS)

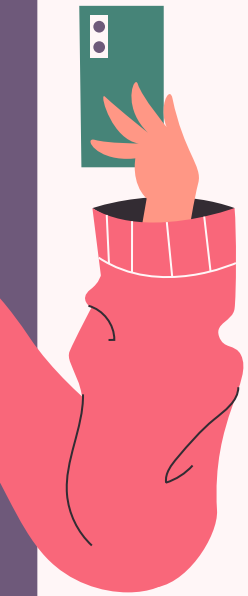
BOLD'PRINT STUDIOS

Generation α

the HUO FAMILY FOUNDATION

Pilot grant awarded to Emma Sullvan

Contents



01

Screens, sleep and adolescents

02

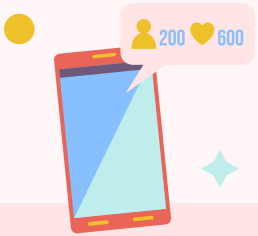
Curiosity to causality: 21 day phone ban study

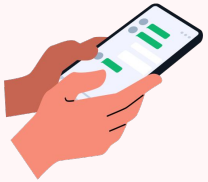
03

What next?

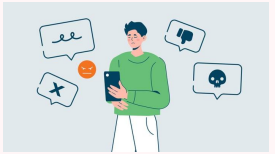
Screens, sleep and adolescents











Online access & device use

- **96%** of children aged 3-17 went online in 2024
- **9 in 10** children own a mobile phone by the time they reach the age of 11

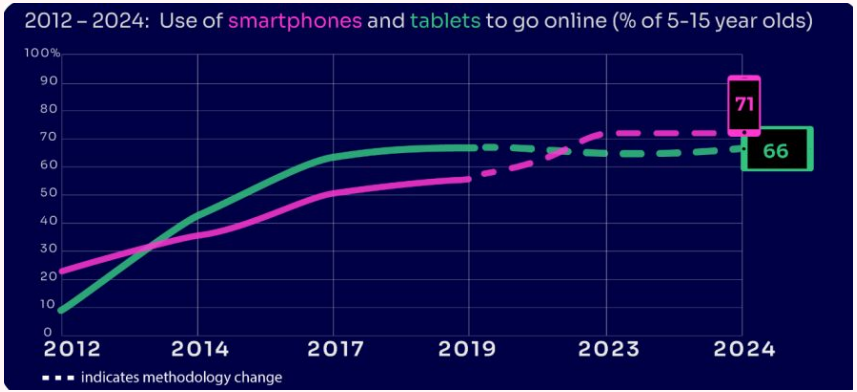
Social media participation

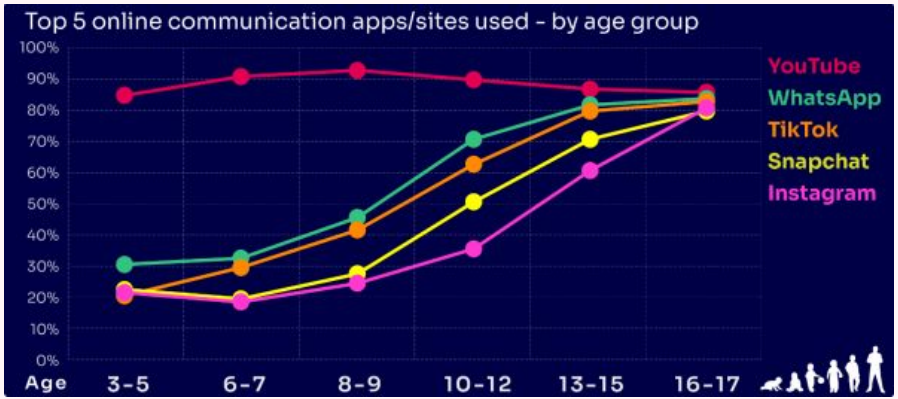
- **55%** of 3-12-year-olds report using at least one social media app
- **79%** of 3-17-year-old social media users have their own profile

Online harms

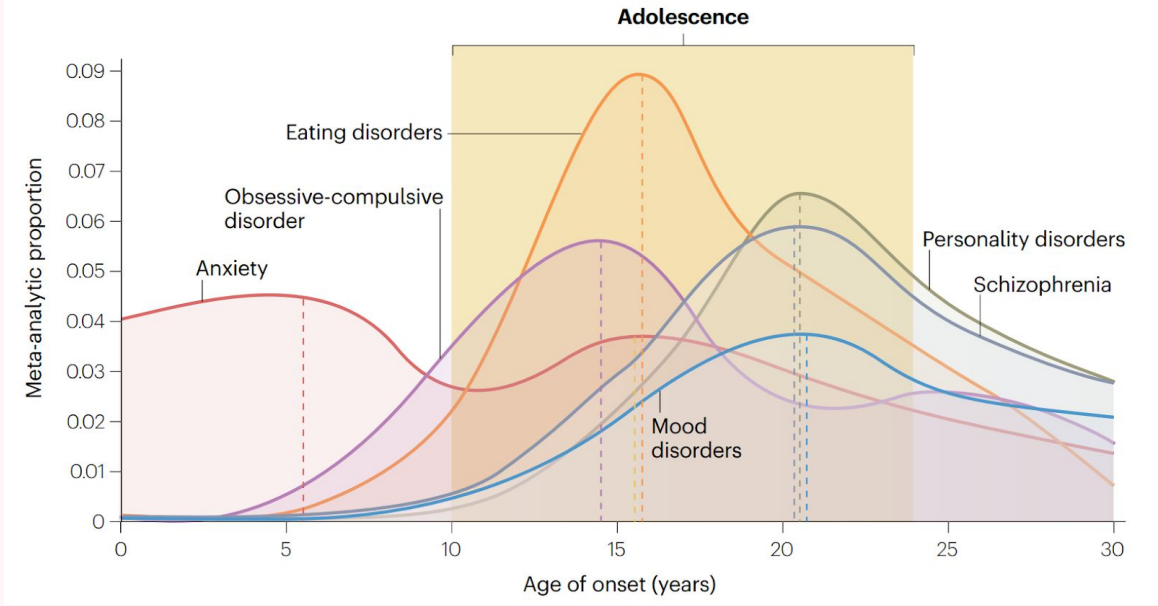
- **33%** of 8-17s say they have seen something worrying or nasty online in the past 12 months
- **7 in 10 parents** are concerned about their child seeing age-inappropriate content online

Ofcom *Child and parents: Media use and attitudes report 2025*





Ofcom *Child and parents: Media use and attitudes report 2025*



Orben et al (2024)

Teenagers who report addictive use of screens at greater risk of suicidal behaviour, study show

Experts find link between compulsiv
phones and video games and menta

Screens and ado
broke ch

As evidence mounts that devices are sparking
Thorne says he thinks smartphone sales sh
media and tech are really

HEALTH › PARENTING · 6 MIN READ

Don't give childre
new research say

UPDATED JUL 21, 2025



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Guernsey | Jersey | Local News

een time

h problematic
se are twice as
anxiety

liction is leading to
brain rot," doctors say

By Meg Oliver

March 19, 2025 / 7:53 PM EDT / CBS News

Kids who own smartphones before age 13 have worse mental health outcomes: Study

Early smartphone use was linked to low self-image in girls and boys.

RISKS

Mental health and emotion regulation

Sedentary behaviour

Suicide and self-harm

Exposure to harmful content

Sleep

Cognition, attention and school grades

Language and social interaction



BENEFITS

Social connectedness

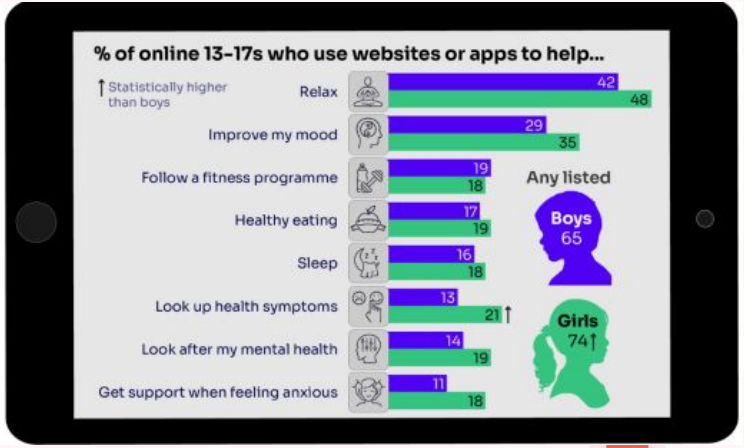
Support

Self expression

Combat loneliness

Belonging

Support





Ofcom *Child and parents: Media use and attitudes report 2025*

Evidence = mixed

Weak correlations (Orben et al)

No effects of school bans (Goodyear et al., 2025; King et al., 2024)

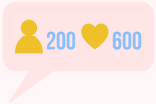
Total abstinence for 1 week can reduce anxiety/depression in adults (e.g., Brailovskaia et al, 2023)

Blocking mobile internet for 2 weeks reduces smartphone use and improves wellbeing and attention in adults(Castelo et al, 2025)

Longitudinal evidence shows addictive screen use predicts mental health (Xiao et al, 2025) and vice versa (Vasconcellos et al, 2025)

What about sleep?









Social media use may increase psychological stimulation

Time spent on social media replaces time for sleep

Screens disrupt melatonin production



Survey findings

(N >2000, 11-19 yrs old)



38% use their phones after

24% report at least one sleep issue linked to screen use

47% sleep with their phones next to their bed

18% use their phones immediately after waking



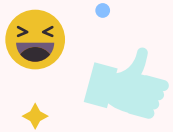


Scoping review findings

12 longitudinal studies (ages 5-25)

75% showed at least one negative impact on sleep

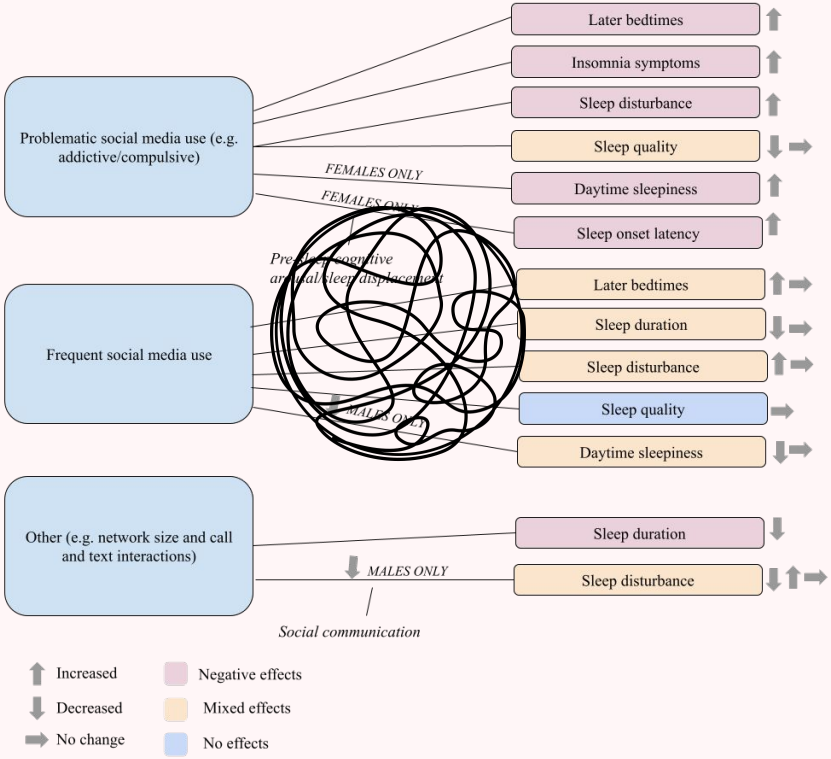
Strongest evidence pointing **problematic** or **excessive social media use around bedtime** as contributing to **later sleep onset time** and **increased sleep onset latency**

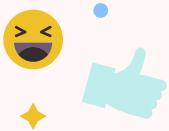


Sullivan, Dubicka, Kirsop, Henderson (*Under review*).



Scoping review findings





Sullivan, Dubicka, Kirsop, Henderson (*Under review*).

Curiosity to causality: 21-day phone ban study




SWIPED
THE SCHOOL THAT BANNED SMARTPHONES
VIEWING FIGURES
BOLD PRINT STUDIOS
4
RANKED AS
#1 SHOW OF THE DAY ON CHANNEL 4 LINEAR
PEAKED AT 1M LIVE VIEWERS
OVER 1.3M
0 - 7 DAY VIEWING FIGURES
OVER 1.5M
0-28 DAYS VIEWING FIGURES
+69% ON SLOT AVERAGE FOR CHILDREN
+33% ADULTS WITH CHILDREN
+150% "HOUSEWIVES" WITH CHILDREN
+14% 16-34S

Feasibility study

- Cognitive tasks
- Questionnaires



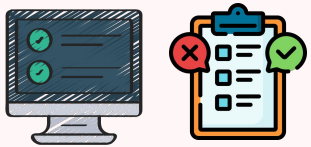
Pre-ban tests

- Wearable monitoring
- Daily diaries



Ban period (21 days)

- Cognitive tasks
- Questionnaires



Post-ban tests

- N = 26 (aged 12, 15 males, 11 females)



Sullivan, Henderson et al (*PsyArXiv*).

Main findings

Time taken to fall asleep reduced by **20 minutes**

Sleep duration increased by **1 hour**

Significant reduction in anxiety symptoms (**22%**)

Improvements in sustained attention

Reduction in negative mood

No change in social connectedness

Sullivan, Henderson et al (*PsyArXiv*).

Pilot study



Larger sample
~80 adolescents aged 13-18 years from two secondary schools/sixth forms



Comprehensive data
Qualitative data; monitoring smartphone use and key behaviours

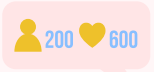


Follow-up
Two-month online check to assess longer-term impacts



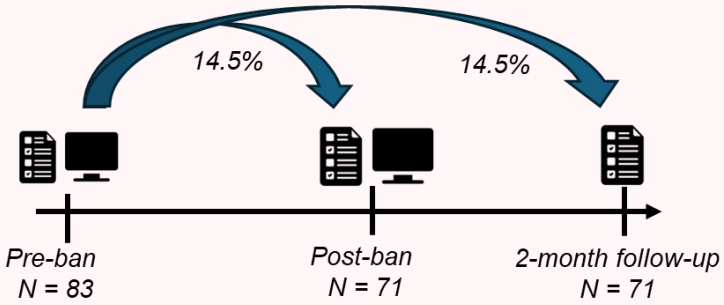
Randomised control groups
Normal use, social media ban with brick phone, and full abstinence







Pilot study

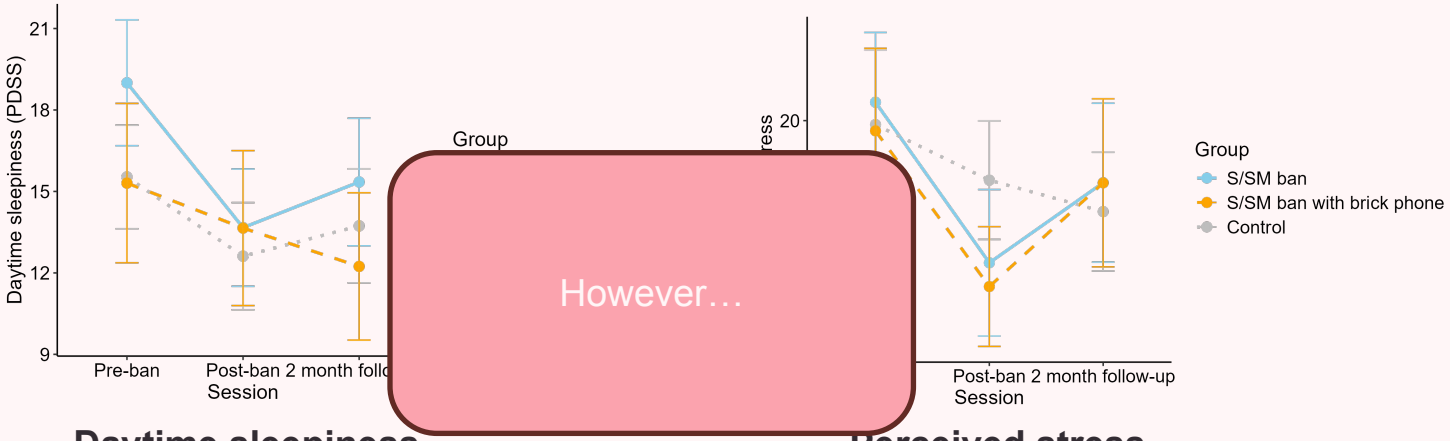


Three groups in the study:

- Smartphone ban group (S/SM ban)
  N = 28
- Social media ban group (S/SM ban with brick phone)
  N = 26
- Control group
  N = 30

63% female, ages 13-18 years across 2 schools

Main findings



However…

Daytime sleepiness declined from pre-ban to post-ban with the greatest reductions in S/SM ban group

Perceived stress declined from pre-ban to post-ban with the greatest reductions in both S/SM ban groups

However...

Domain	Measure	Session Effect	Group Effect	Interaction Effect	Significant comparisons
Sleep	Sleep Quality	✗	✗	✗	
	Sleep Onset Latency	✓	✗	✗	↓ Post-ban (**−9.09 mins**, p = .004)
	Sleep Duration	✓	✗	✗	↑ Post-ban (**+0.63 hrs**, p < .001)
	Daytime sleepiness	✓	✗	✓	↓ Post-ban (**−3.35 pts**, p < .001); greatest reductions in the S/SM ban group (**-5.45pts**, p < .001).

However...

Domain	Measure	Session Effect	Group Effect	Interaction	Significant Comparisons
Wellbeing	Depressive symptoms	✓	✗	✗	↓ Post-ban (**−1.37 pts**, *p* <. 001) and follow-up (**-0.81 pts**, *p* = .042)
	Anxiety symptoms	✓	✗	✗	↓ Post-ban (**−2.28 pts**, *p* < .001); ↑ at follow-up (**+1.42 pts**, p = .001)
	Negative mood	✓	✗	✗	↓ Post-ban (**−3.03 pts**, *p* < .001); ↑ at follow-up (**+3.25 pts**, *p* < .001)
	Positive Mood	✗	✗	✗	
	Stress	✓	✗	✓	↓ Post-ban (**−5.00 pts**, *p* < .001) and follow up (**−2.67 pts**, *p* = .002) ; greatest reductions in both S/SM ban groups from pre-to-post ban. S/SM ban group (**-6.44 pts**, *p* <.001), S/SM ban + brick phone (**-6.58 pts**, *p* <.001)

However...

Domain	Measure	Session Effect	Group Effect	Interaction	Significant Comparisons
Cognition	Errors of commission (SART)	✓	✗	✗	↓ Post-ban (**-0.07**, *p* = . 007)
	Errors of omission (SART)	✗	✗	✗	
	Corsi Forwards Accuracy	✓	✗	✗	↑ Post-ban (**+0.05**, *p* = .005)
	Corsi Backwards Accuracy	✗	✗	✗	

Qualitative findings



- Asked participants open-ended questions on how they found the ban (feelings, benefits, challenges) and whether they were able to abstain for the full 21 days

- Also asked what they think the government should do to regulate smartphone use





How do you feel about the smartphone/social media ban now? (post-ban)

Positive feelings
49%

*"A **great** experiment that has given me reason to remove social media on my phone"*

*"I have **really enjoyed** having time off my phone. I have been getting **better sleep** and have felt a lot **more productive**"*

Negative feelings
12%

*"At the start I liked it but three weeks is far **too long**. I **hate** it now"*

*"It **hasn't helped** me **concentrate** better, if anything I've felt **less productive**"*

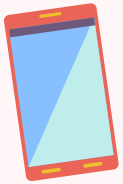
Mixed feelings
39%

*"It's ok. A little **frustrating** sometimes when I need a service on demand e.g. finding directions"*

"I feel that it helped me use my time more wisely, but I got bored with nothing to do alot"

Responses from 43 students

How did you feel it challenged you? (post-ban)





Boredom
24%

"Weekends when I wasn't going to school, I didn't have much to do "

"No music in frees or bus ride, made it really boring"



Functional dependency
43%

"Not being able to listen to music on the bus and not being able to message people before meeting up for plans/ not scrolling on my phone while waiting for people felt awkward"

"Not having as good quality of music on demand, not having google maps, not being able to post what I'm doing on Instagram and not being able to contact my friends or family in college (there's no signal)"



FOMO/reduced connection
33%

"You feel like you are not really connected to people around you like you are missing lots of stuff"

"Feeling like I'm missing out when people are talking about things they have seen on social media, and I hadn't"







Responses from 49 students

How do you feel it benefited you? (post-ban)



Time spent offline

"I had a lot more time to do important things like look at universities and do my work, and I had less worries"

"I got to do more of my hobbies instead of being on social media for hours a day"



Attention

"I felt very productive and got much more work done. I watched more shows and books which I normally struggle to focus on"



Wellbeing

"I got a lot more sleep"

"I have felt my stress levels drop significantly taking the stress of social media and the thought of my phone away entirely"



Offline connectedness

"It has helped me be more social because when I go out, I can't go on my phone so people around me don't go on theirs as much and we connect more"

"Spending more time with family"

Responses from 45 students

Did you manage to stay off social media for the full 21 days? If you did use it, how often or in what way? (post-ban)

Gaming

"I only used it a tiny bit if you count playing with friends online but i had discord closed so I basically only used it to organise lifts and outings and talk to them while gaming, other than that I didn't"

Special occasions

"I used it on my birthday to reply to people that wished me a happy birthday, but that is all"

Friends' devices

"I used social media on my friend's phone for a little bit of time "

Specific apps

"YouTube occasionally on pc, both to learn new skills and very rarely entertainment"

"Only went on it for 30 seconds to do snap streaks that's all "

Responses from 45 students

What steps do you think the government should take to regulate smartphone use <16? (Follow-up)

Bans/restrictions

"A complete **social media ban** for school aged children until they reach the end of Y11"

"Anyone under 10 should not have a phone"

"Enforce the age restrictions on social media by having to provide ID to keep young children off social media platforms "

Regulation and laws

"Responsibility for tech companies to remove harmful content"

"More **regulation** on the **addictive nature** of social media"

"More **laws** in place preventing ownership to a certain age"

Guidance and education

"Provide **more education to young children in schools**"

"I think the government should give better guidance on phone usage"

Better care/support

"Better help with online bullying"

No action/unsure

"They shouldn't. I was **worse without it** I think"

17%

Responses from 64 students

Improvements in the control group over time

Feasibility of a 21-day phone ban for adolescents

What next?



- **Appropriately powered large-scale RCTs** to evaluate impacts and outcomes
- **Look beyond frequency measures** at the timing of use and physiological impact of social media
- **Identify at-risk groups** to explore who is most vulnerable to negative effects
- **More manageable interventions:** Collective approaches, bedtime/daily reduction approaches rather than total bans….

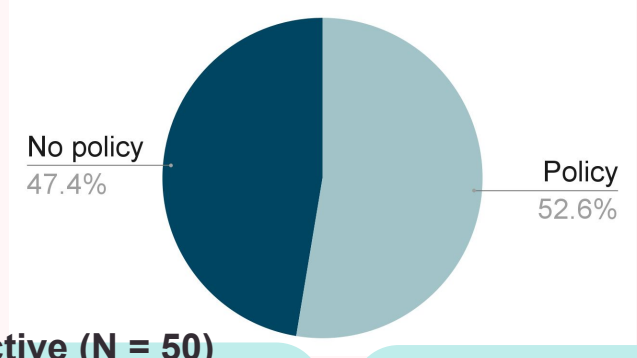


Are school bans part of the answer?

116 UK schools



>10% in 36 schools; >25% in 9



Restrictive (N = 50)

- Moderately (19; not allowed but on person)
- Highly (25; phones inaccessible)
- Completely (6; not on site)

Permissive (N = 62)

- Moderately (6; used in designated areas)
- Highly (2; used at any time)
- No policy (54)

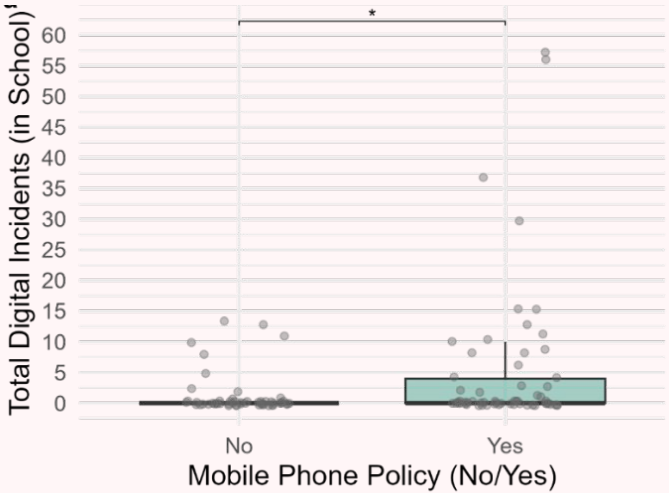
Sullivan, Montgomery, Dallison & Henderson (2025) *Under review*.

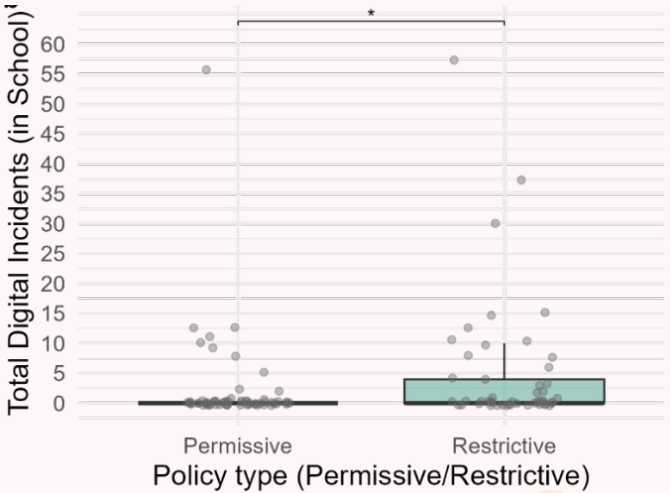
Are school bans part of the answer?

116 UK schools

Schools with policies:

- More incidents
- More referrals

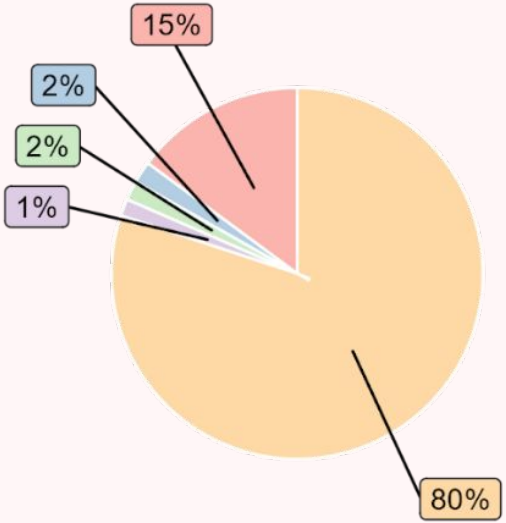




Sullivan, Montgomery, Dallison & Henderson (2025) *Under review*.

Are school bans part of the answer?

116 UK schools



Location

- On school premises
- On school transport e.g. school bus
- Elsewhere on school journey e.g. walking, on public transport
- On a school trip, residential or other event organised by the school
- Outside of school e.g. at home

Total incidents: 2031

Sullivan, Montgomery, Dallison & Henderson (2025) *Under review*.

Are school bans part of the answer?

116 UK schools

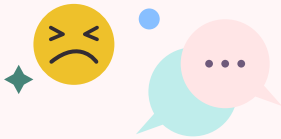
Restrictive policies may increase detection and reporting (rather than reduce incidents or improve mental health; Goodyear et al, 2025)

School bans not the total solution

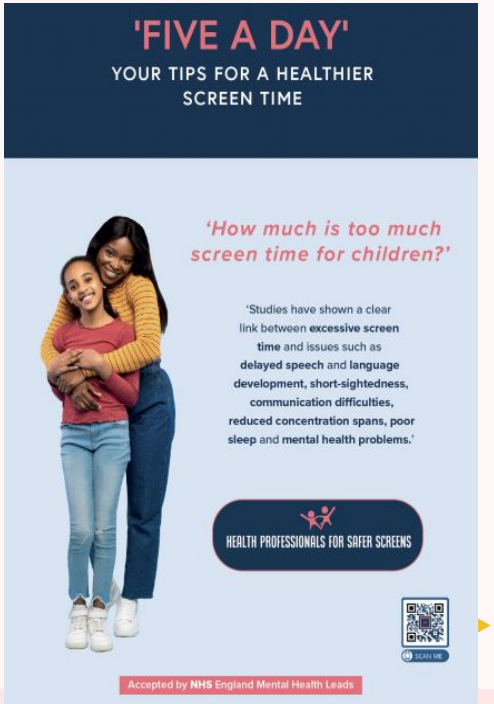
We need to learn how to live healthy in the digital age in a way that keeps our young and vulnerable safe.

- “Five a day”
- Smartphone free schools
- Smartphone free zones at home
- Setting good habits from early years



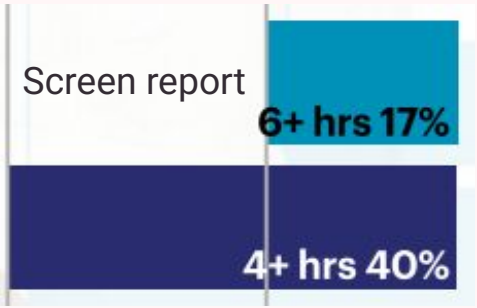


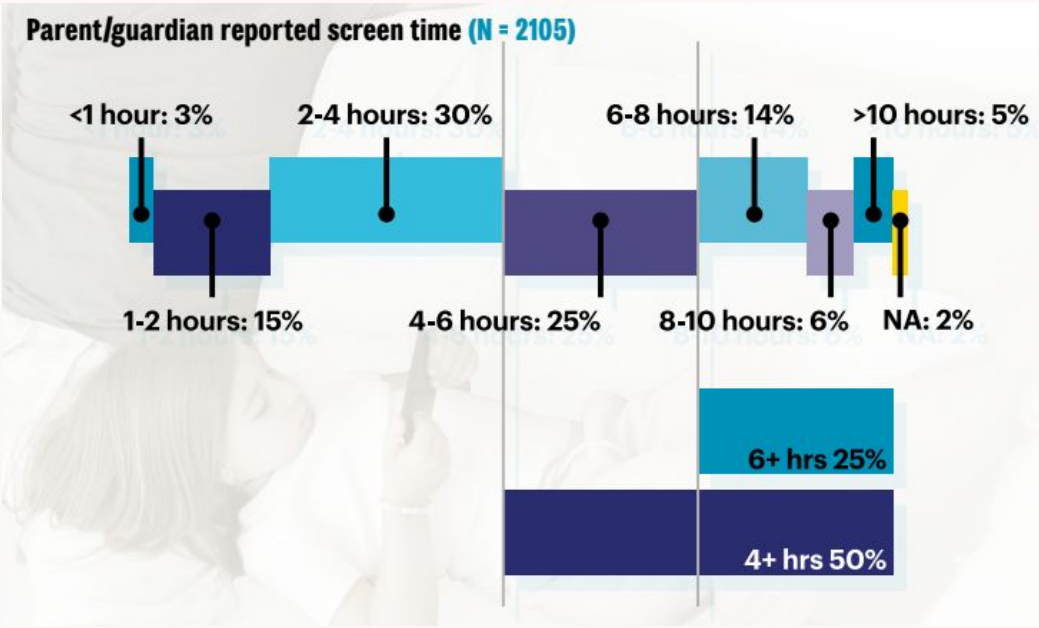
SAFE SCREENS



Looking to the home environment

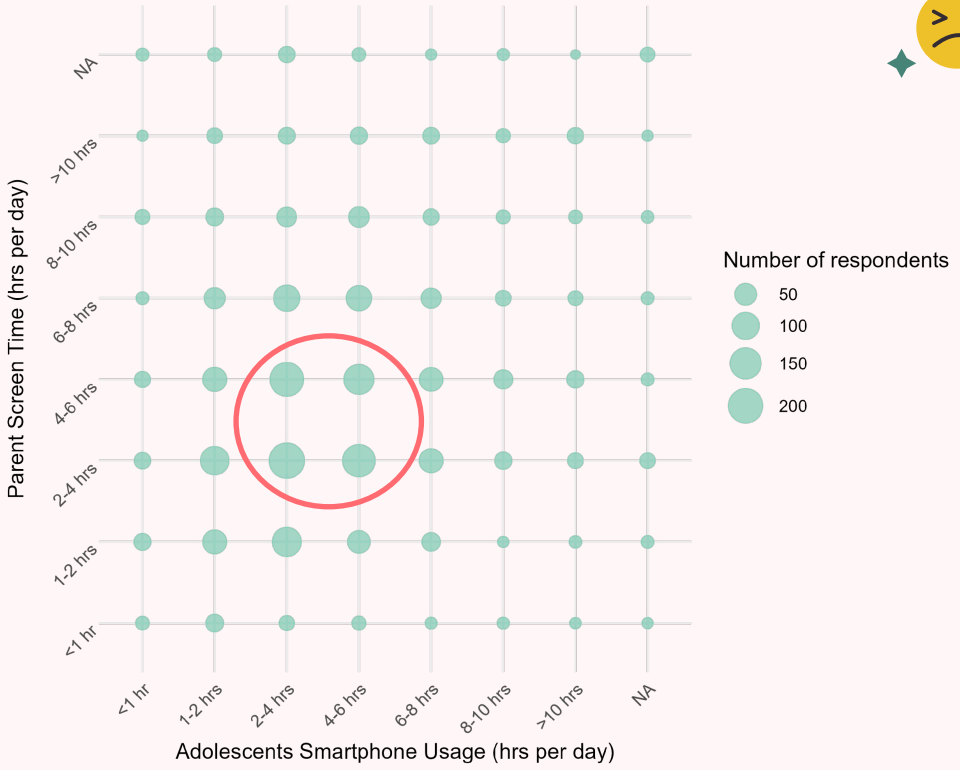






Looking to the home environment

Parent smartphone usage significantly correlated with adolescent usage.

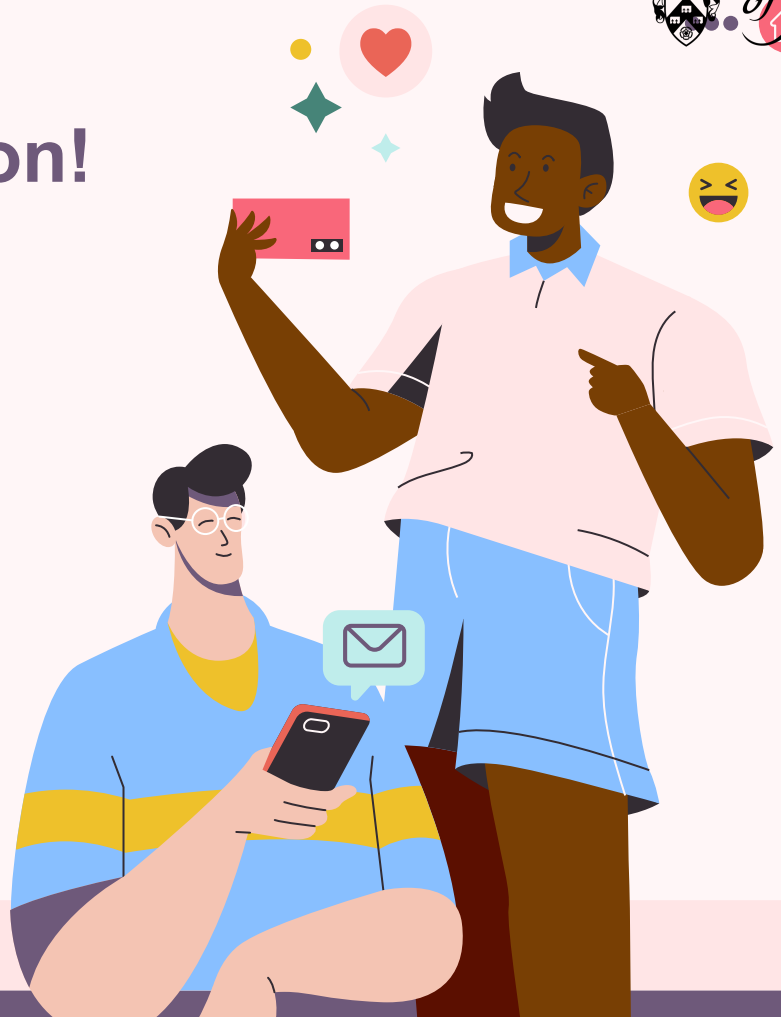


Thanks for your attention!

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