



UNIVERSITY
of York

Understanding the effects of smartphones and social media use on adolescents

Professor Lisa Henderson & Dr Emma Sullivan





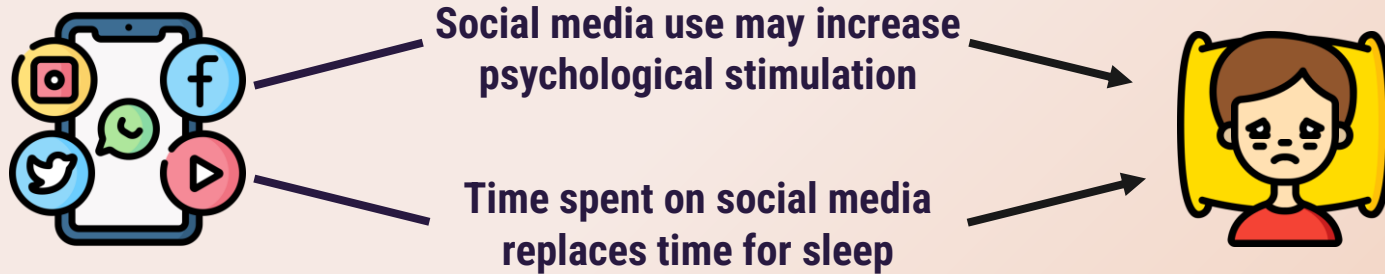
Does social media damage sleep?

What does the evidence say?



Our scoping review

- 12 longitudinal studies examined if social media use leads to poor sleep
- 66.6% → at least one negative impact of social media use on sleep
 - Delayed bedtimes and increased time taken to fall asleep



Young girls more likely to use
social media for social comparison
→ negative thoughts



Gathering further evidence on smartphones and sleep: Channel 4 documentary



Whole school survey results

- As part of the documentary we gathered data from 1,149 students aged 11-16 years on smartphone and social media habits, sleep and wellbeing (currently recruiting for more participants)



42% estimate using smartphones for 3 hours or more per day, 19% spend more time than

We need **causal** evidence

We also have a **responsibility** to educate our young people on the need to improve their digital behaviours to safeguard their health

estimate using social media for 3 hours or more per day, 10% spend 4 hours or more



38% use their smartphones in bed and 53% sleep with their smartphones next to their beds

10% report encountering explicit content (including strong language, violence and sexual behaviour), 11% report seeing this daily or weekly



Channel 4 orders two-part special, *Swiped: The School that Banned Smartphones*, from BOLDPRINT Studios with Matt and Emma Willis

News Release

10 September 2024

Channel 4 has commissioned *Swiped: The School that Banned Smartphones*, a landmark two-part documentary series, produced by BOLDPRINT Studios, which will tackle the timely issue of the impact of smartphones on children's behaviour with a pioneering social experiment.

[Back to news](#)

Contacts

Registered users only



TV couple to give up smartphones with Essex pupils



Researchers test impact of school smartphone ban in new Channel 4 documentary

[News and events home](#)

[News](#)

[Events](#)

[Features](#)

[Press Office contacts](#)

Researchers test impact of school smartphone ban in new Channel 4 documentary

Posted on 11 September 2024

Psychologists at the University of York will test the impact that smartphones have on children's behaviour in a new two-part documentary series for Channel 4.



INDEPENDENT

[Electric vehicles](#)

[NEWS](#)

[SPORT](#)

[VOICES](#)

[CULTURE](#)

[LIFESTYLE](#)

[TRAVEL](#)

[PREMIUM](#)

[MORE](#)

INDEPENDENT

[News > UK](#)

Emma and Matt Willis to give up phones with pupils for 21 days in Channel 4 show

The results of behaviour changes over the three weeks will be monitored by University of York researchers.

Charlotte McLaughlin • Tuesday 10 September 2024 13:04 BST



Key features of the study



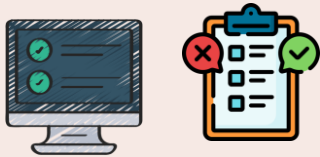
- Run in a typical secondary school with Year 8 pupil's who were not particularly addicted
- Extreme total smartphone/social media abstinence - 21 days
- During the ban smartphones were locked in a perspex box at the school, no access to other electronic devices and could only use laptops for school purposes
- Wide range of outcome measures
- Self-report and objective measurement (tracking actual sleep and physiological measures of wellbeing)



What we did

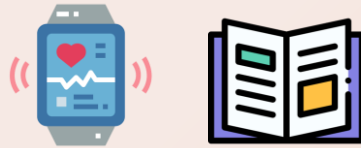
- N = 26 (aged 12, 15 males, 11 females)
- 9 controls

- Cognitive tasks
- Questionnaires



Pre-ban tests

- Watches (sleep, HRV)
- Daily diaries



Ban period (21 days)

- Cognitive tasks
- Questionnaires







Post-ban tests



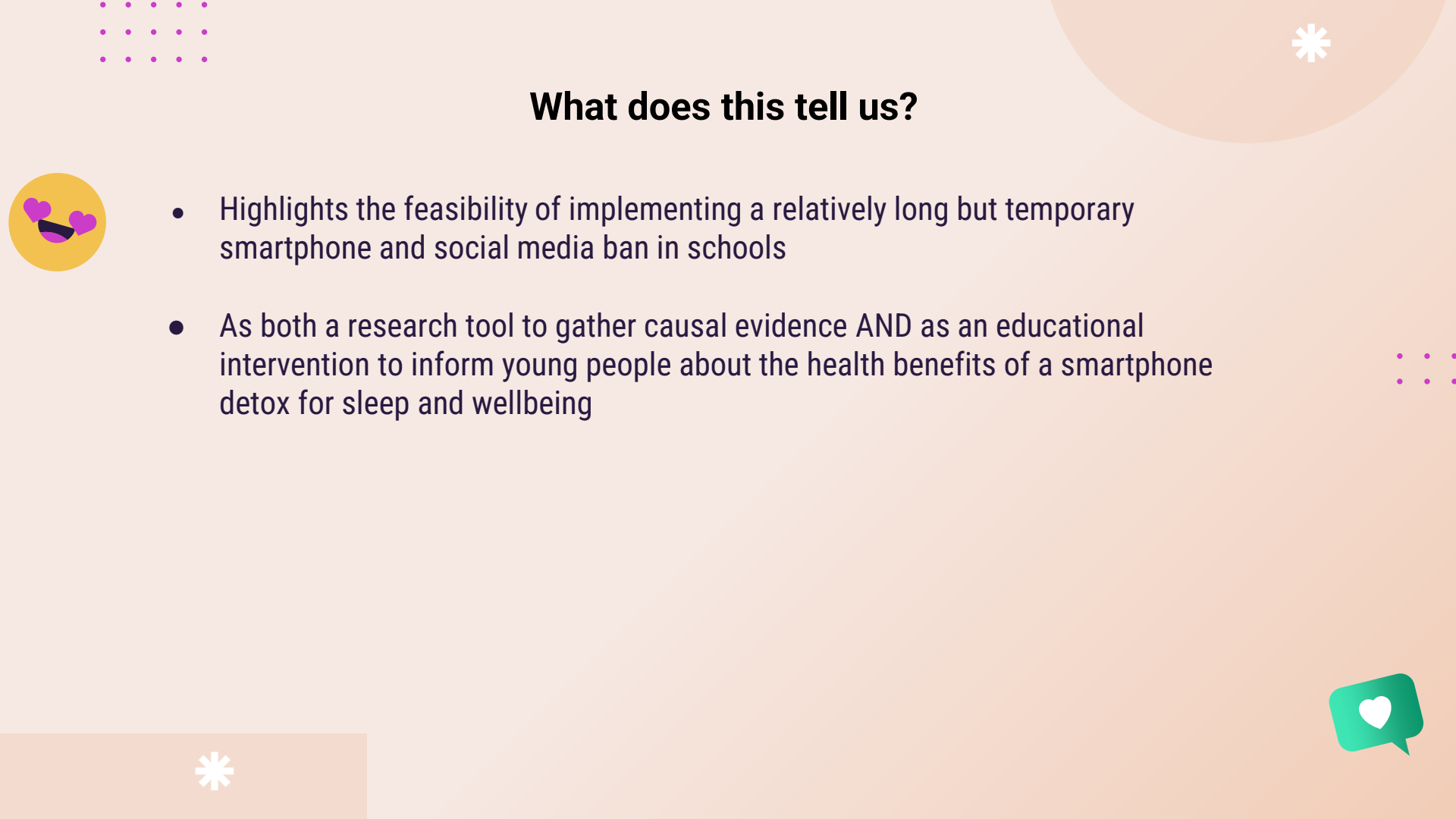


Key findings

- 
- By the end of the ban the time taken to get to sleep significantly reduced by approximately 20 minutes
 - Reported sleep duration increased by one hour on average (watch data 20 minutes)
 - Anxiety symptoms and negative mood significantly reduced (but not depression)
 - Watch data supported these findings (heart rate variability increased within the first few days)
 - Sustained attention significantly improved with children making fewer errors on our cognitive attention task following the ban
 - Social connectedness (how connected students felt to others in their social environment) didn't get any worse
- 
- 
- 

What does this tell us?

- Highlights the feasibility of implementing a relatively long but temporary smartphone and social media ban in schools
- As both a research tool to gather causal evidence AND as an educational intervention to inform young people about the health benefits of a smartphone detox for sleep and wellbeing



What now?



Scaling up!



- **Larger sample:** 120 adolescents ages 11-19 years from two secondary schools/sixth forms (~50 Birkenhead Sixth Form, Liverpool & now recruiting in Fulford School, York)
- **Comprehensive data collection:** Using both subjective and objective measures on >50% of the sample with wearables measuring sleep and wellbeing throughout the ban. Open-text questions on challenges and benefits of ban
- **Longer monitoring before ban:** tracking smartphone use and key behaviours
- **Follow-up:** two month (online) follow-up to assess longer term behaviour change
- **Control groups:** who continue to use phones as normal and who will have access to a brick phone for texts and calls but do not access smartphones/social media.



How are you feeling about the smartphone/social media ban? (Pre-ban)



63%

"I am **excited** to see the effects a lack of smartphone has on my body"

"Very **excited**, I feel i use my phone way too much and a reason to go without is exactly what i needed, especially with A-levels approaching."



14%

"I'm **worried** about not having access to things other than social media e.g. driving tests"

"A bit **scared** because I won't be able to call anyone if I get in dangerous situation"



23%

"**Apprehensive** however I feel that it will be **worthwhile** and **eye opening**"

"I'm **looking forward** to seeing how I react to not having a phone. I'm **worried** I will miss things when in the ban e.g. social gatherings"



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



59%

"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**"



13%

"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**"



28%

"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 32 students

Have you incorporated any new habits into your daily routine since the study? (2 month follow-up)



58%

"I've **downloaded an app** that stops you from going on your phone for certain periods of time to stop using social media as much"

"**Talking** with family **more**"

"I have a solid **morning routine** without using my phone"

"**Limit** on TikTok usage"

"Started **reading** every night **before bed**"

42%

"No"



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



ACTION

83%

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

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

"Provide **more education to young children in schools** and crack down on ensuring the internet is generally a **safe space**"

"Moderate the media more and have restrictions for people under 16. Have it so only certain things appear and have time limits"

"More **regulation** on the **addictive nature** of social media and **more guidance to parents** on the effects of mobile phones"

17%



No. E.g. "They shouldn't. I was **worse without it** I think"



Responses from 36 students



Important questions

- 
- Who are digital detoxes most beneficial for?
 - What kinds of digital detoxes are most effective? (e.g., total ban versus bedtime reduction approaches)
 - Are school bans an important part of the solution?
- 



Thank you!

Bernadka Dubricka

Ellie Redfern

Becky Crowley

Hannah Kirsop

Nicole Levermore

Emma James

Scott Cairney

Alex Wade

MSc students (Alice, Imogen, Vanessa, Pareshti)

Boldprint Studios

Huo Family Foundation

lisa-marie.henderson@york.ac.uk

emma.sullivan@york.ac.uk

CREDITS: This presentation template was created by **Slidesgo**,
including icons by **Flaticon**, and infographics & images by **Freepik**

