



# The impact of screen use on the socio-emotional development of Irish 5-year-olds

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# Screen Use and Socio-Emotional Development



Mostly measured in adolescents

(Ferguson, 2011, 2015, 2017; Przybylski, 2017; Przybylski & Orben, 2018; 2019)



Small effect sizes;  
Reporting in the media;  
Replication issues

(Elson & Ferguson, 2014; Bell, Bishop & Przybylski, 2015)



Research on children is focused on TV viewing or Video games – Hyperactivity, Aggression, and Peer Problems

(Anderson & Bushman, 2001; 2002)

# Screen Use and Socio-Emotional Development



Causational inferences?

(Ferguson, 2015)



Well-designed games and apps  
can provide social skills and  
communication skills

(Yeh-Lane, Moosbrugger, Liu, & Arnold,  
2011; Ke & Im, 2013)



Importance of parental  
engagement

(Richert, Robb, Fender, & Wartella, 2010;  
Brown, 2011; Haughton, Aiken, &  
Cheevers, 2015)



E-books and bonding

(Ross, Pye, & Randell, 2016)

# Methods



9,001 5-year-olds



Strengths and Difficulties  
Questionnaire (SDQ)

## Prosocial Behaviour

Emotional

Peer Problems

Conduct

Hyperactivity

} **Internalising**

} **Externalising**



ANOVAs and Regressions:

Screen Use Variables

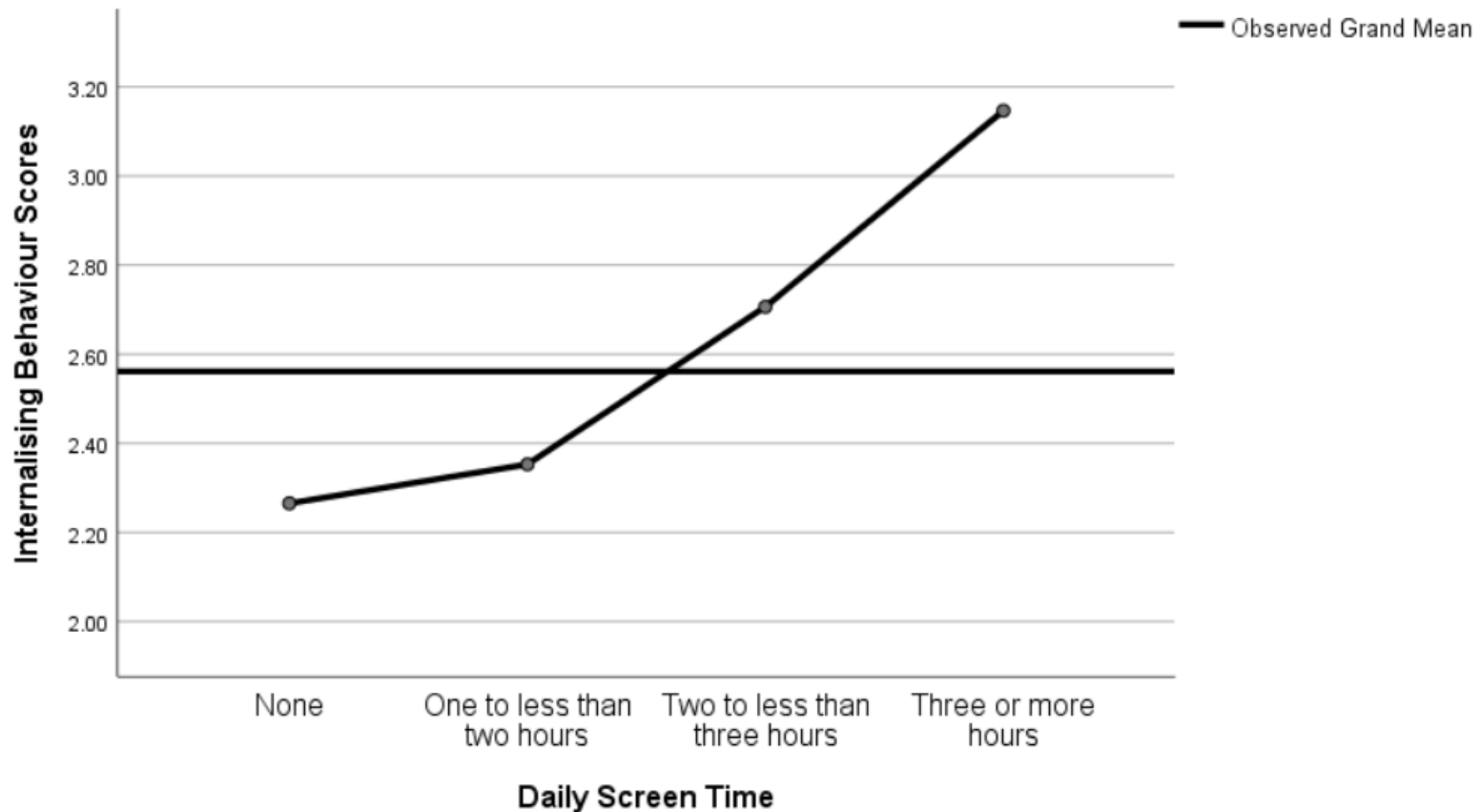
Attachment Variables

Environmental & Family Factors

# Findings: Internalising Behaviour

**Screen Time:** (None, 1 to <2 hours, 2 to <3 hours, 3 or more hours)

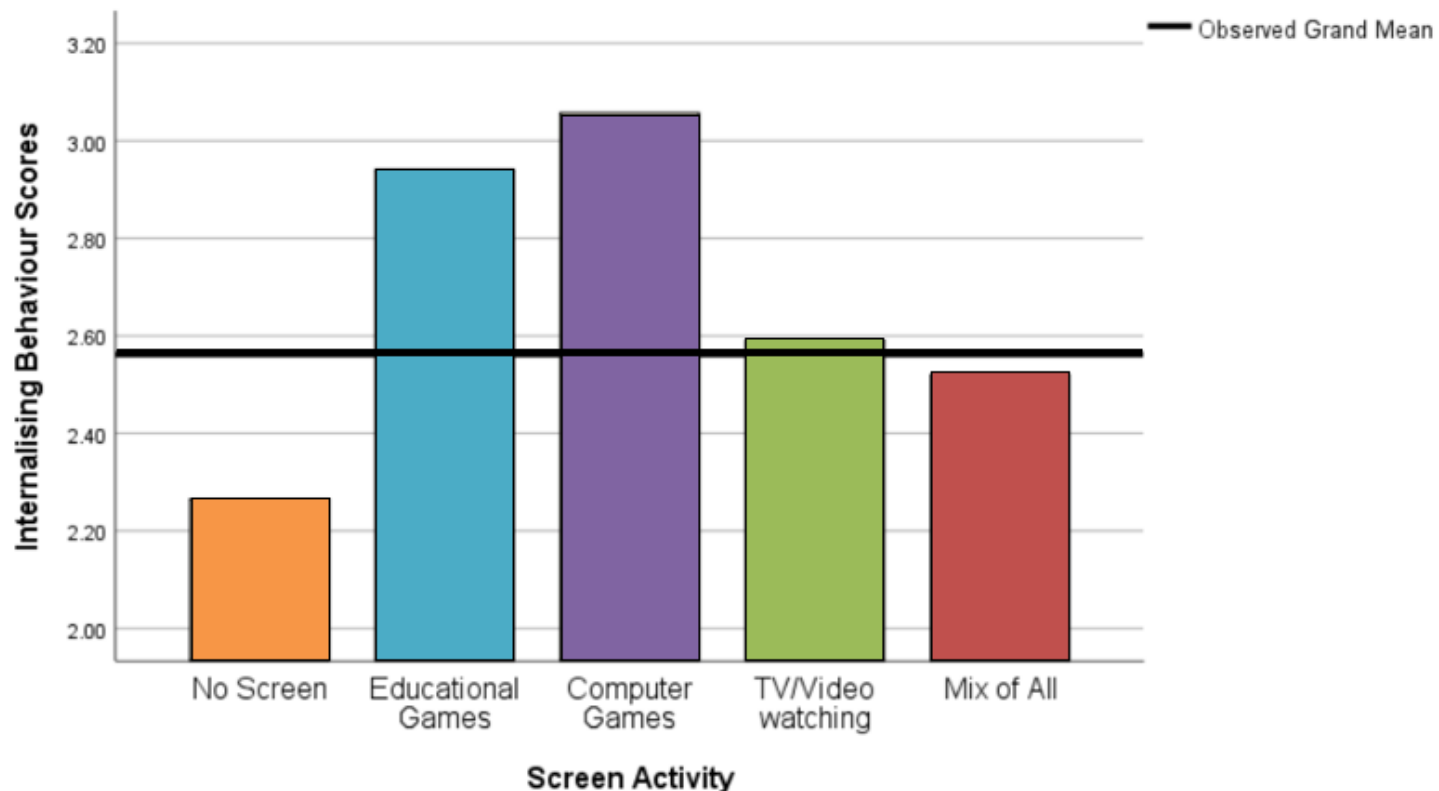
- $F(3,8997)=39.671, p<.001$
- 2-3 hours and more than 3 hours significantly higher



# Findings: Internalising Behaviour

**Screen Activity:** (No Screen Time, Educational Games, Computer Games, TV/Videos, Mix of All)

- $F(4,8986)=4.881, p=.001$
- Computer games significantly higher than all but educational games



# Findings: Internalising Behaviour



Screen Time:  $R^2$  change = .013 (1.3%)



Screen Activity:  $R^2$  change = .003 (0.3%)



Attachment with caregiver:  $R^2$  change = .175 (17.5%)

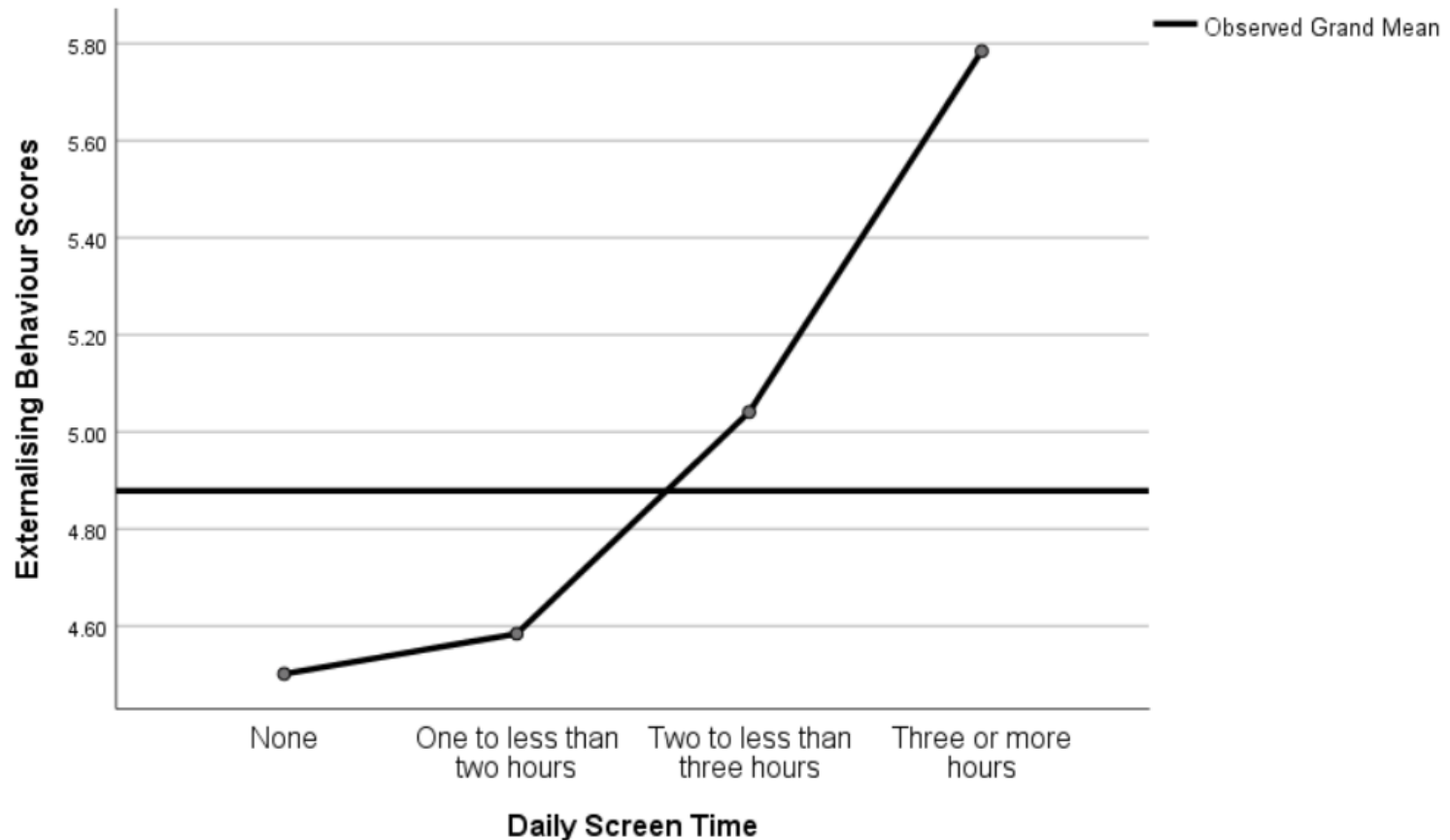


Education/SES/Siblings:  $R^2$  change = .011 (1.1%)

# Findings: Externalising Behaviour

**Screen Time:  $F(3,8996)=44.973, p<.001$**

- 2-3 hours and more than 3 hours significantly higher

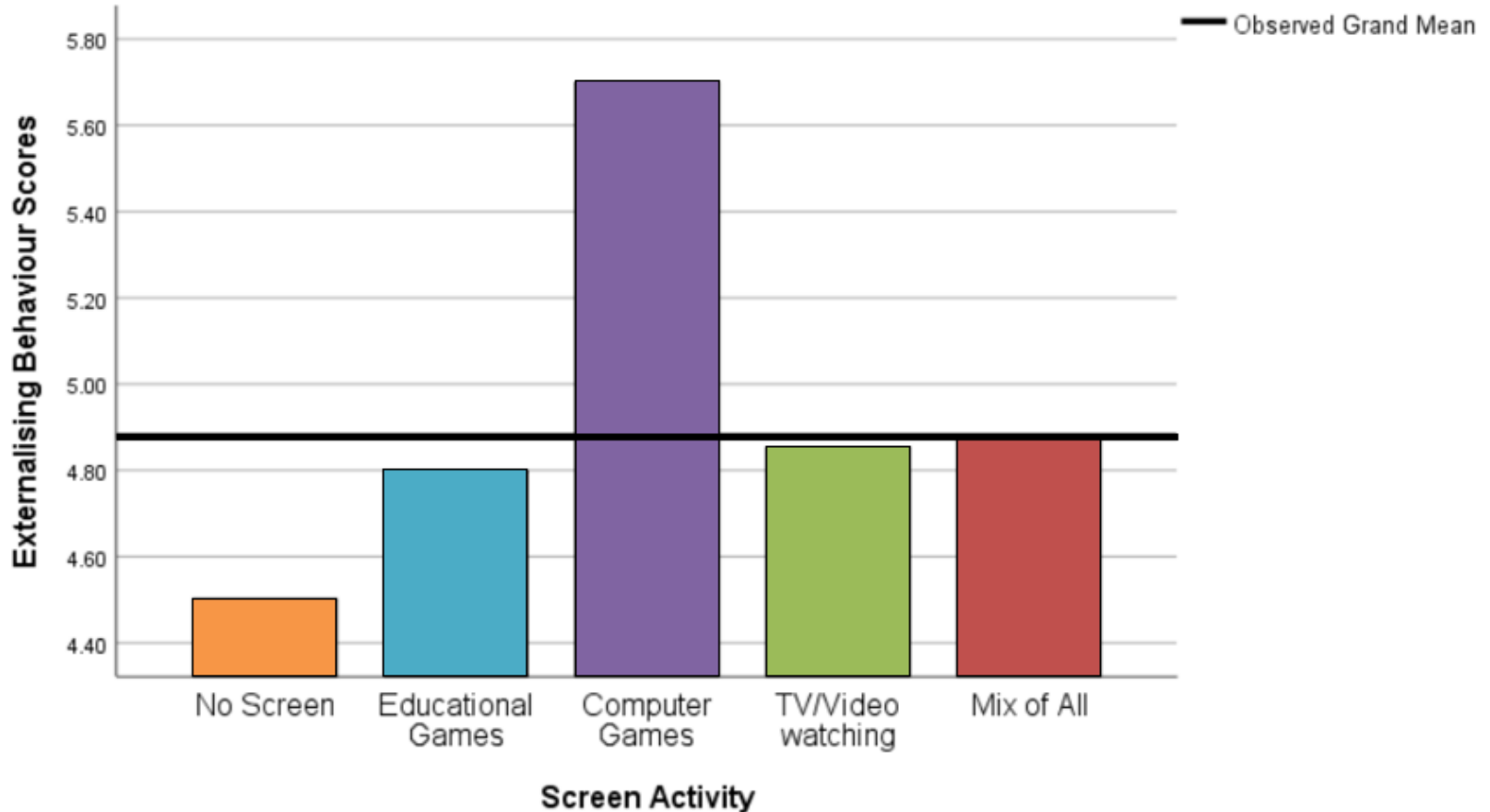




# Findings: Externalising Behaviour

**Screen Activity:  $F(3,8985)=4.676, p=.001$**

- Computer games significantly higher than all activities



# Findings: Externalising Behaviour



Screen Time:  $R^2$  change = .015 (1.5%)



Screen Activity:  $R^2$  change = .002 (0.2%)



Attachment with caregiver:  $R^2$  change = .321 (32.1%)



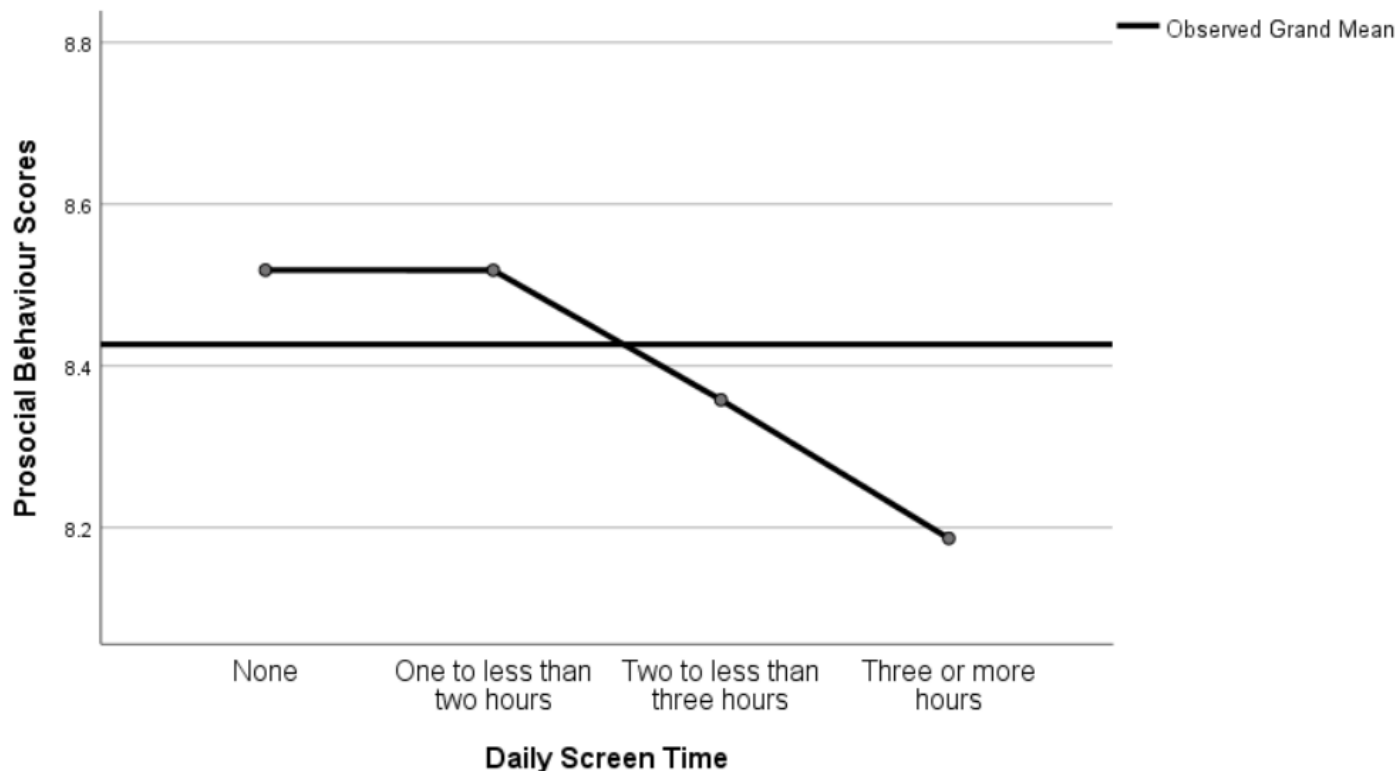
Education/SES/Siblings:  $R^2$  change = .018 (1.8%)

# Findings: Prosocial Behaviour

**Screen Time:**  $F(3,8997)=15.670$ ,  $p<.001$

- 2-3 hours and more than 3 hours significantly lower

**Screen Activity:**  $F(3,8986)=2.726$ ,  $p=.406$



# Findings: Prosocial Behaviour



Screen Time:  $R^2$  change = .006 (0.6%)



Screen Activity:  $R^2$  change = .000 (non-significant)



Attachment with caregiver:  $R^2$  change = .175 (17.5%)



Education/SES/Siblings:  $R^2$  change = .003 (0.3%)

# How does this compare?



More than two hours of screen time a day had a negative, but small, effect on the children's socio-emotional development scores



Children who engaged mostly in computer games scored higher in the scales than any other screen activity



Effect sizes are small and therefore should be interpreted with caution



Parental attachment and stress levels, along with environmental factors, have a higher impact on socio-emotional development than screen use variables (especially externalising behaviour)

# Future Research and Implications



Focusing on the  
**content** rather than  
time itself



Providing strong  
scientific evidence  
to back up claims



Observing screen  
time in **context**



Parental advice



Parental technology  
use (**Connections**)



Advising  
governmental  
policies



# Thank You

## Questions?



Cognition, Development and  
Learning Lab @MIC



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