Windows of Developmental Sensitivity to Social Media

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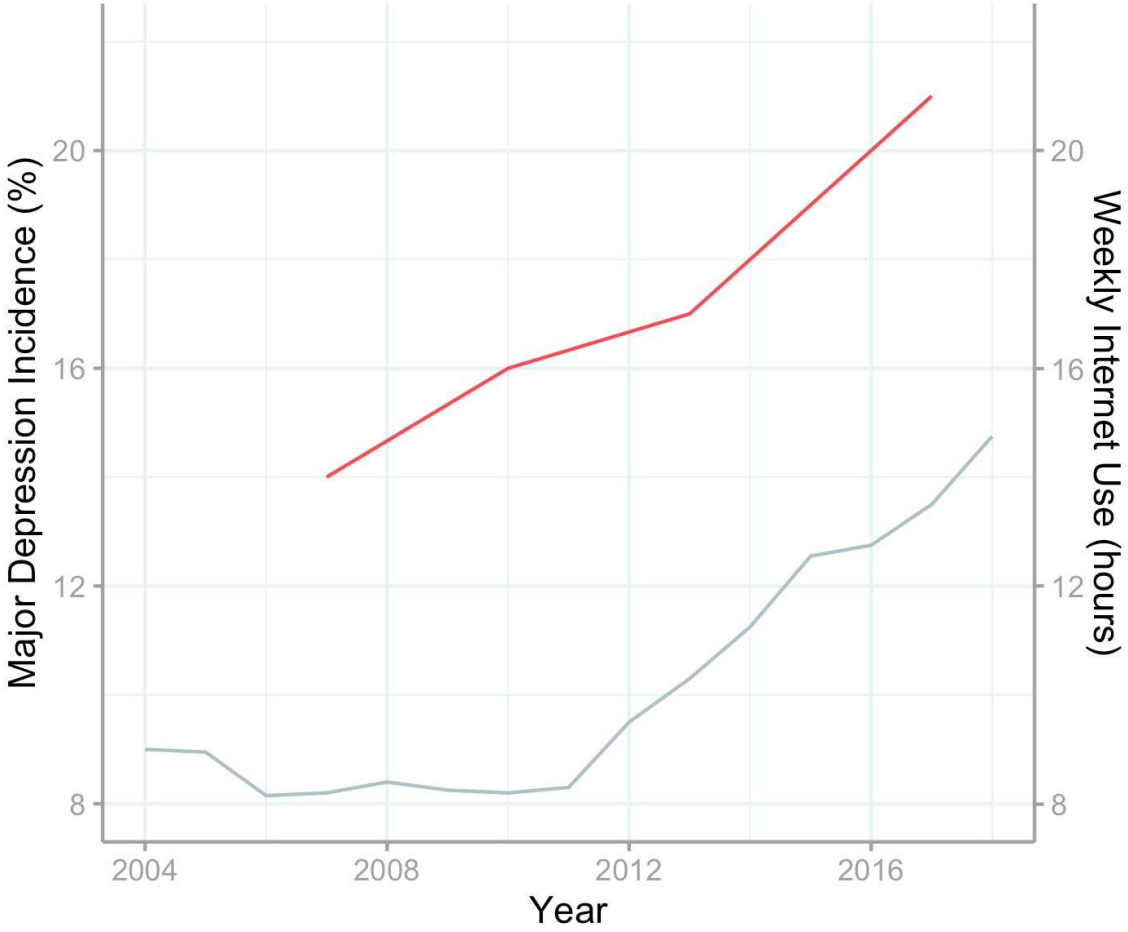
Dr. Amy Orben



Rates of reported adolescent mental health conditions have increased over the last decade (NHS Digital, 2020)

In the UK today, an estimated 5 children in every classroom has a mental health condition (Young Minds, 2021)

Half of all mental health conditions start by 14 years of age (Kessler et al. 2007)

Data taken from the US National Survey on Drug Use and Health, Table 11.2b

Previous Work

- Correlation between adolescent mental health and social media use is very small and negative (Odgers and Jensen 2020; Orben 2020; Hancock et al. 2019)
- Mixed results in both observational and experimental work (Allcott et al. 2019; Aalbers et al. 2018; Orben and Przybylski 2019a, 2019b)

Directional Links

12,672 adolescents (10-15 years old; Understanding Society Dataset)

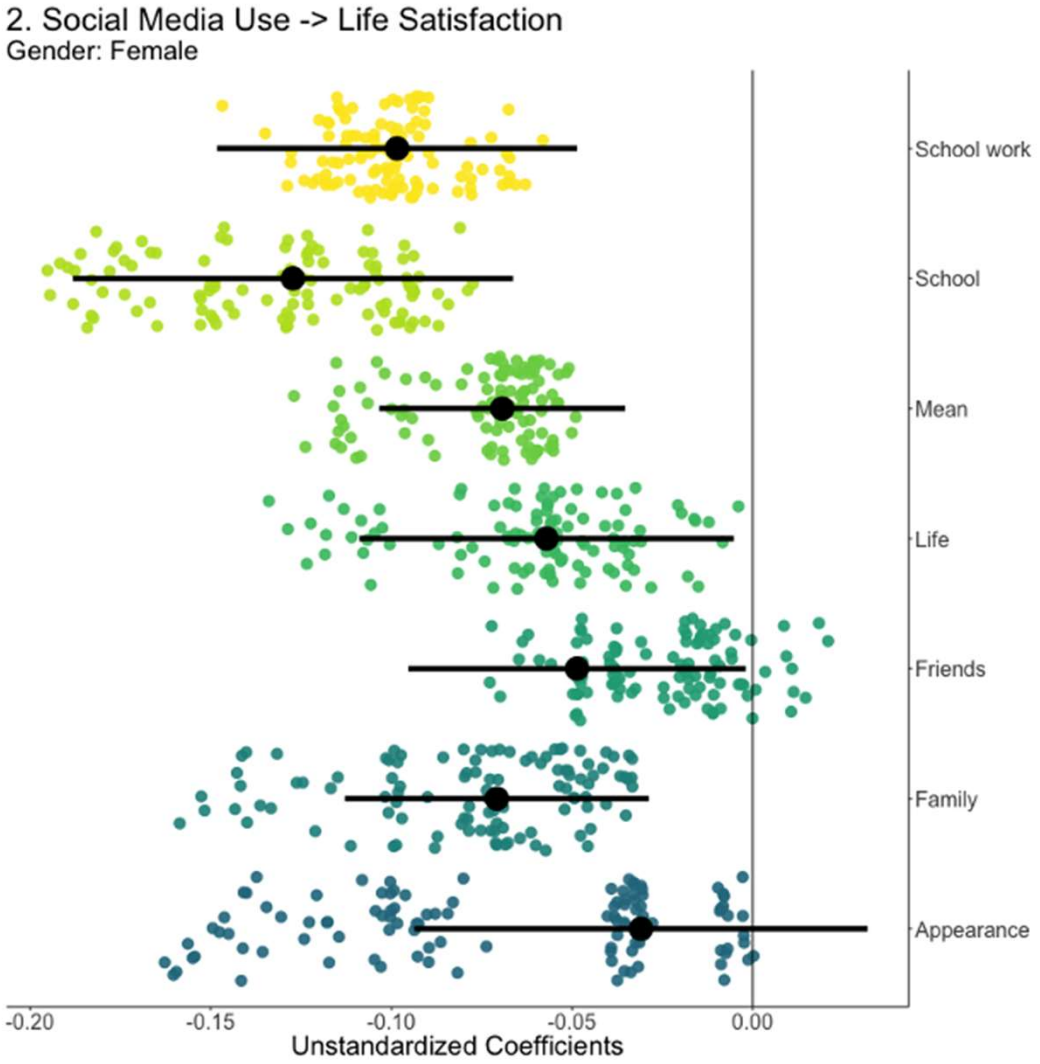
Orben, Amy, Tobias Dienlin, and Andrew K Przybylski (2019, PNAS)

Lower than (the participants own) average life satisfaction in one year predicts a small increase in social media use one year later

Higher than average social media use in one year predicts a small decrease in life satisfaction one year later

Examining gender differences

12,672 adolescents (10-15 years old;
7 annual waves questionnaire data, UK)



Orben, Dienlin and Przybylski, 2019, PNAS

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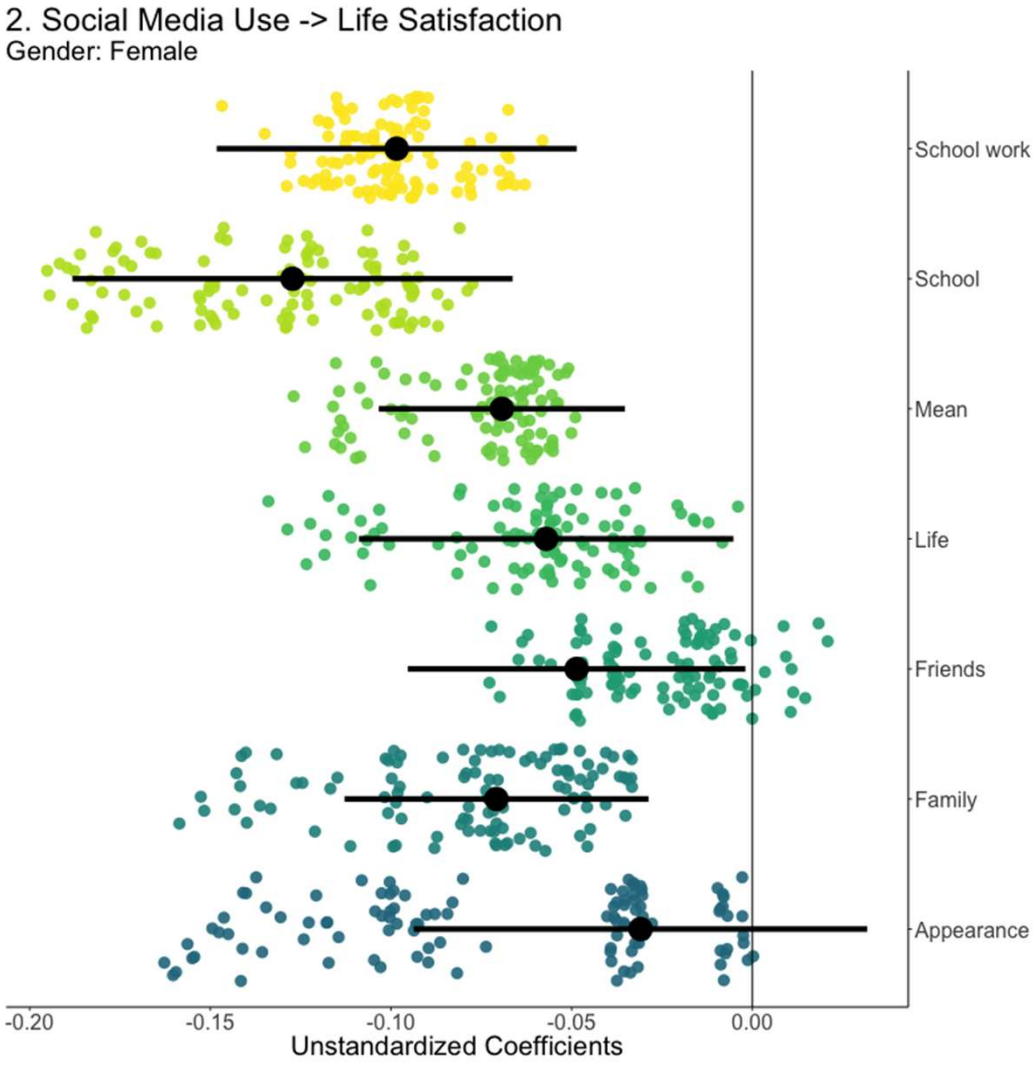

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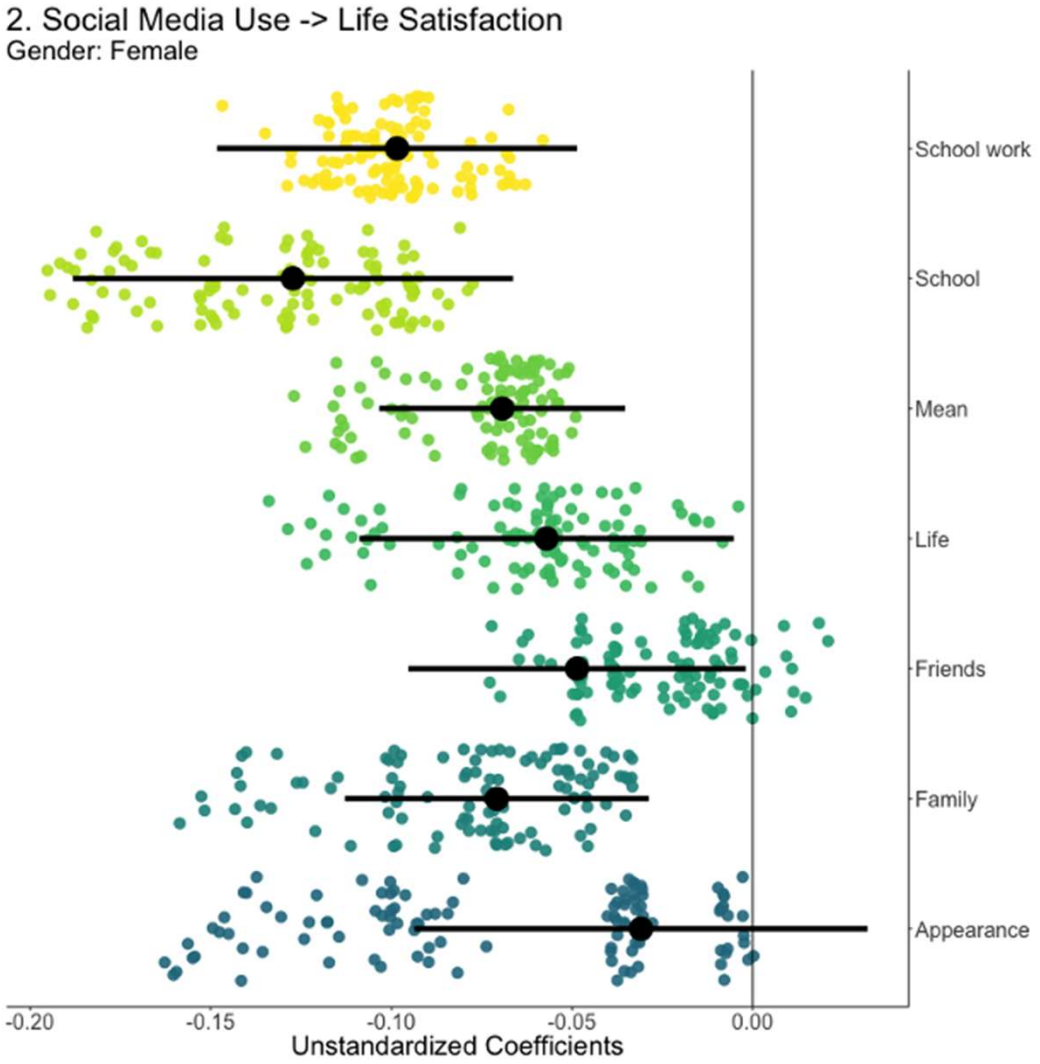

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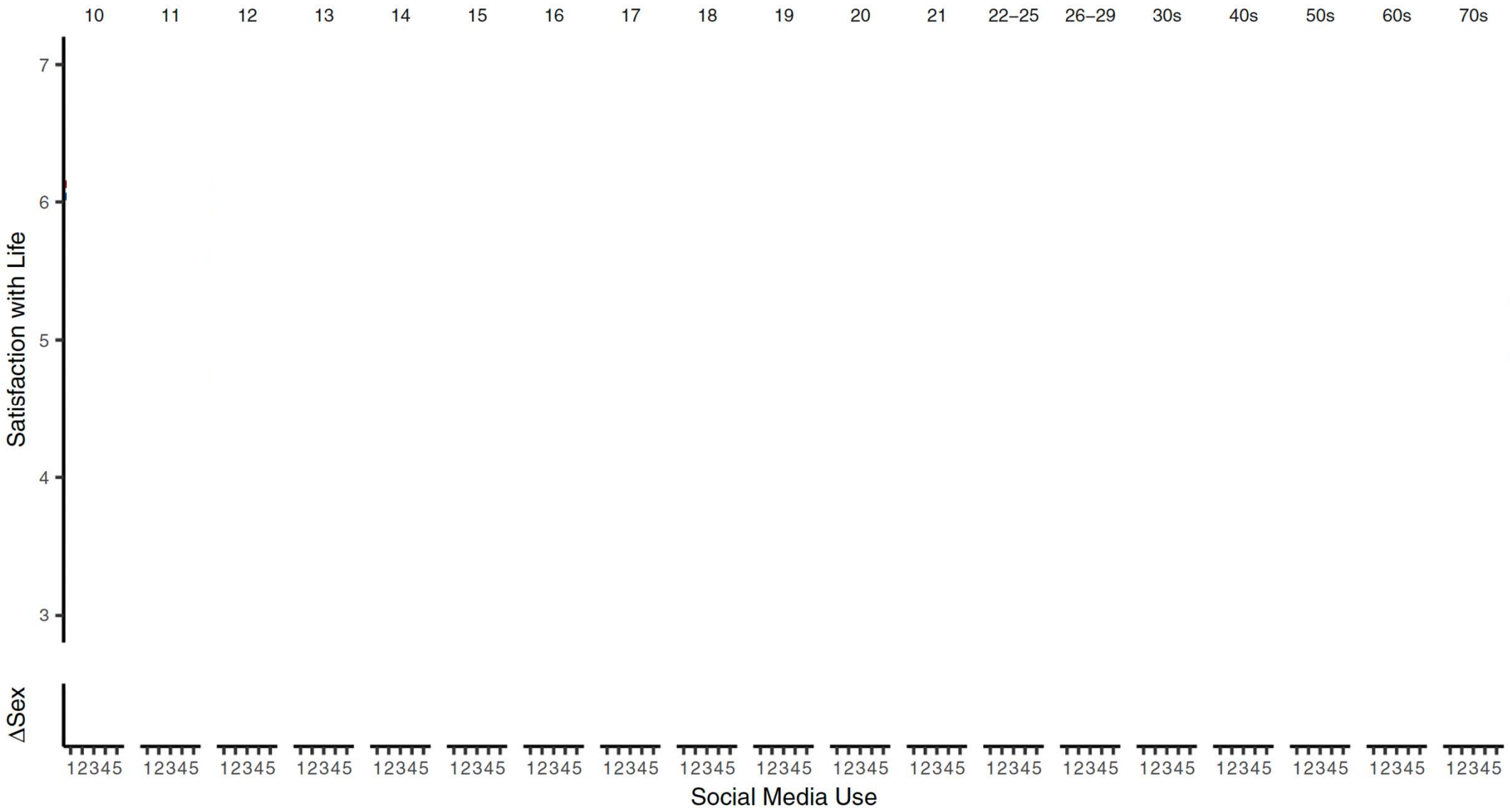
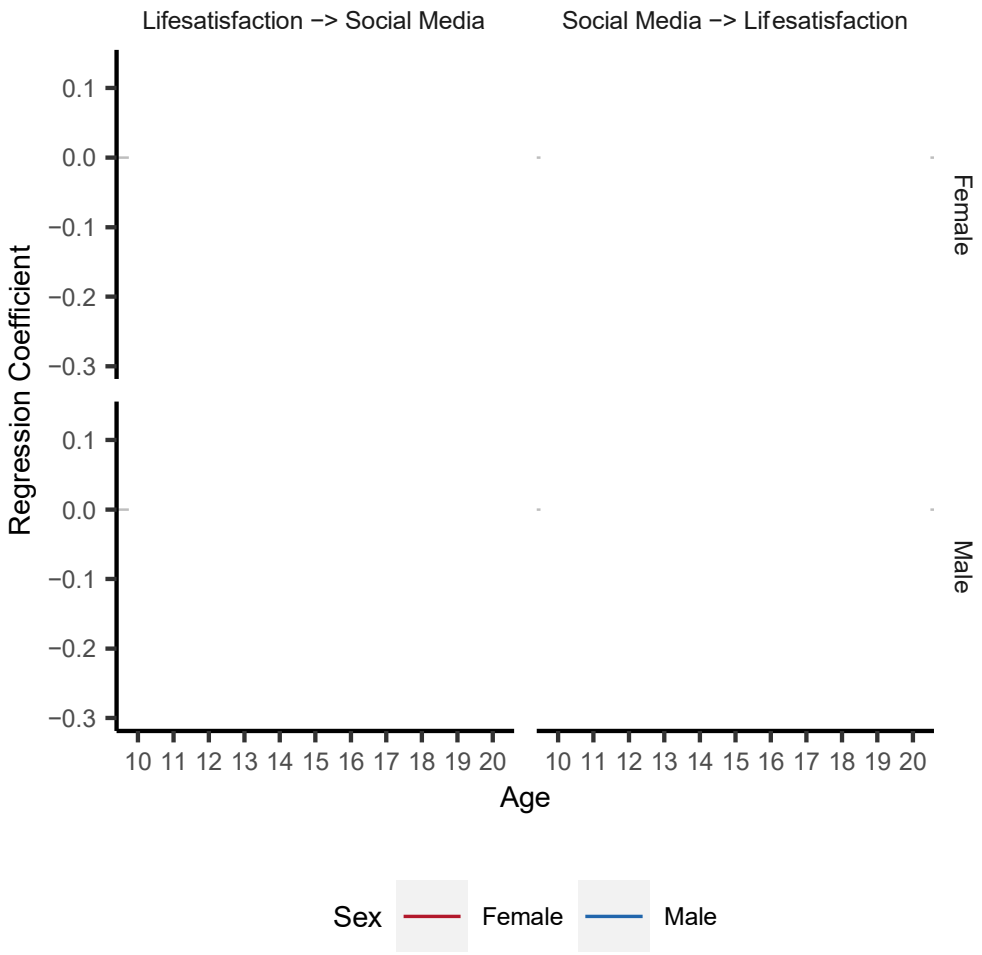
What is new in this work?

1. Inclusion of **larger age range**: cross-sectional data across the lifespan & longitudinal data for ages 10-21 years
2. Two datasets of over **84,000 UK participants**, with one dataset (17,409 participants) being collected over 7 annual waves
3. Pioneering a developmental approach: our statistical modelling allowed the bidirectional links between social media use and life satisfaction to **vary across age**



72,287 UK participants between the age of 10 and 80 years

$\chi 2$ (434) = 1216.29, $p < 0.001$, RMSEA = 0.014, [0.013, 0.015], CFI = 0.944, SRMR = 0.072; Full Informational Maximum Likelihood estimation; two-tailed test).

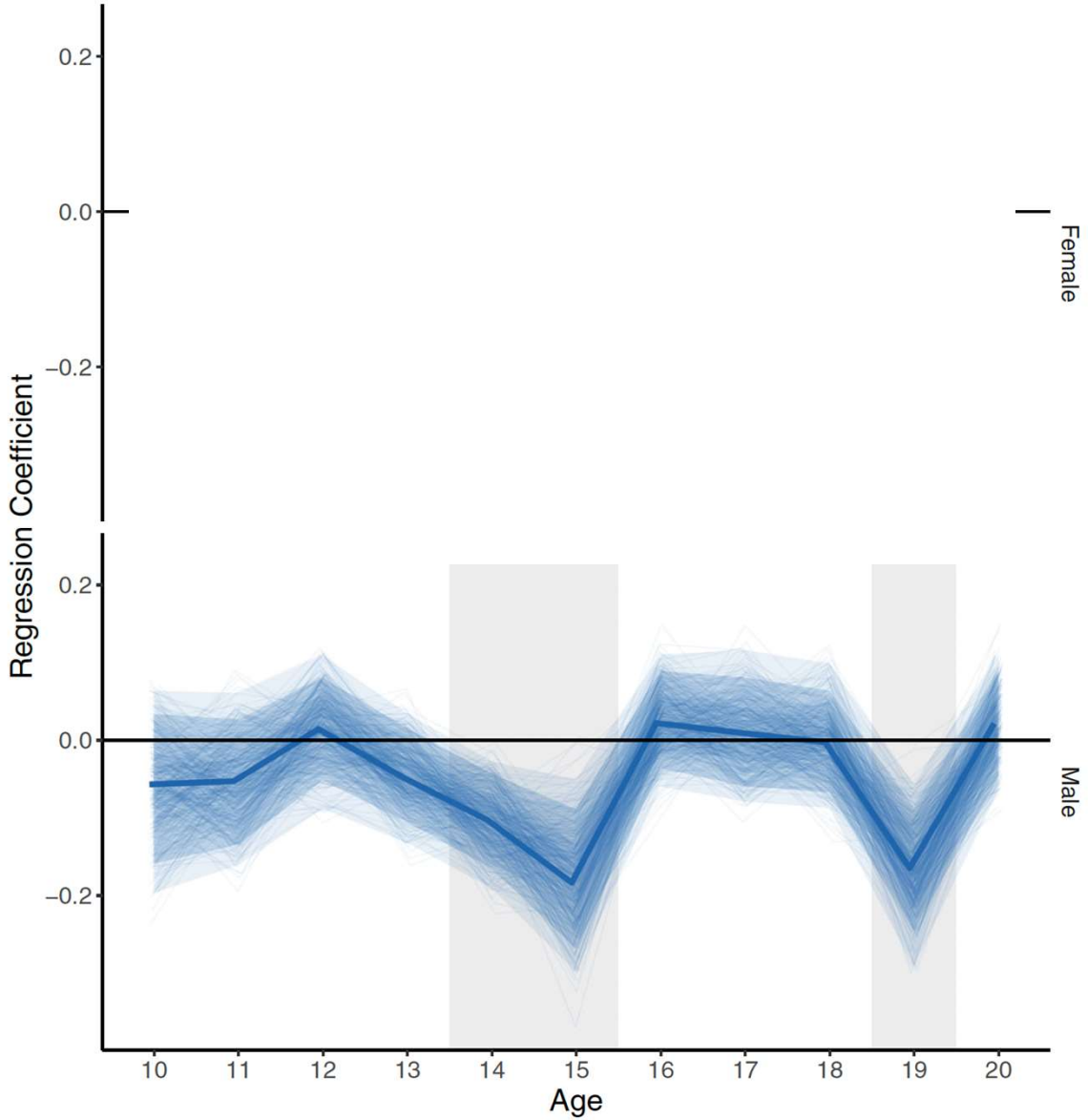


Longitudinal Results

17,409 adolescents (10-21 years old; Understanding Society Dataset)

Varied across age and sex

Constant across age and sex: Higher than average life satisfaction in one year predicts a small decrease in social media use one year later


0.2
0.0
−0.2
Regression Coefficient
Female
0.2
0.0
−0.2
Male
10
11
12
13
14
15
16
17
18
19
20
Age

Conclusions

- There is evidence of **bidirectional links** with social media use predicting small decreases in life satisfaction one year later and vice versa
- Importantly, we find that there are **certain ages** (which differ between sexes) when social media more substantially predicts life satisfaction
- Follow up research from my group is investigating the practical significance of these associations **using Innovation Panel data**.

Thank You

Barnardos

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