

Why did we do this study?

Social media use has become almost ubiquitous among young people. Through its ability to encourage personal expression, improve information access and strengthen connections, it can present several benefits to young people's health and development. However, social media may also influence young people's attitudes towards cigarette, e-cigarette and alcohol use, resulting in their increased uptake. It is also possible that social media's influence on these behaviours may differ across socioeconomic groups, with the potential to widen health inequalities.

Existing research mainly examines US populations and 'causality' (the science of cause and effect) remains unclear.

What did we do?

For policymakers to make informed decisions on social media regulation and guidance, more accurate assessments of these relationships are needed. We aimed to estimate the effect of time spent on social media at age 14 years on the risk of five key outcomes at 17 years:

1. Cigarette use (control group – never used or tried once)
2. E-cigarette use (control group – never used or tried once)
3. Dual use of cigarettes and e-cigarettes (control group – never used or tried once)
4. Frequency of alcohol use in the past month (1 to 2 times, 3 to 5 times, 6 or more times; control group – no alcohol use)
5. Binge drinking (control group – no binge drinking)

We also examined if the influence of social media on these key outcomes differed by socioeconomic circumstance, using highest parental education as a proxy measure.

We used data from the UK-representative, prospective Millennium Cohort Study, gathered from young people and their caregivers when the young people were aged 9 months, 3, 11, 14 and 17 years.

Following a published statistical analysis plan developed with input from a Policy Advisory Group,¹ we used statistical modelling to firstly explore the relationship between time spent on social media and the above outcomes. We accounted for other influences such as parental and peer risk behaviours and in person activities. Time spent on social media was categorised into:

- No social media use
- 1 to less than 30 minutes (control group)
- 30 minutes to less than 1 hour
- 1 to less than 2 hours
- 2 or more hours

We used 1 to less than 30 minutes as our control group; this was based on the threshold of potential harm seen in comparable studies and because non-social media users are highly atypical. Secondly, we used statistical modelling to identify if parental education might protect against the risk posited by social media use on these key outcomes.

What did we find?

- As time spent on social media increased, so did the risk of cigarette, e-cigarette, and dual use, frequency of alcohol use, and binge drinking. This was generally the case regardless of whether social media use was taking place on weekdays or the weekend.
- The influence of social media use on cigarette use and binge drinking was especially strong for those more advantaged families.



¹ Members included representatives from the UK Health Security Agency, Office for Health Improvement and Disparities, Scottish Government, Public Health Scotland, We Are With You, University of Sheffield, and the University of Stirling.

What next?

There are limitations to this and other research, linked to the quality of current data. However, overall, our findings point towards potentially harmful effects and strengthen calls for tailored guidance on social media use and restrictions on nicotine and alcohol-related content (including commercial/influencer marketing and user-generated content) on social media. Importantly, there is a need for increased awareness of the algorithms driving adolescent exposure to such content on social media, thus facilitating their interrogation and redesign to ensure they function in a way which best serves adolescents.

Link to papers

- [The relationship between time spent on social media and adolescent alcohol use: a longitudinal analysis of the UK Millennium Cohort Study](#)
- [The relationship between time spent on social media and adolescent cigarette, e-cigarette and dual use: a longitudinal analysis of the UK millennium cohort study](#)

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